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A M E R I C A N
A G R I C U L T U R I S T ;

DESIGNED

TO IMPROVE THE PLANTER, THE FARMER, THE STOCK-BREEDER,
AND THE HORTICULTURIST.

AGRICULTURE IS THE MOST HEALTHY, THE MOST USEFUL, AND THE
MOST NOBLE EMPLOYMENT OF MAN. *Washington.*

A B. ALLEN AND R. L. ALLEN, EDITORS.

VOLUME X.

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PHILADELPHIA : JOSIAH TATUM. *vi*

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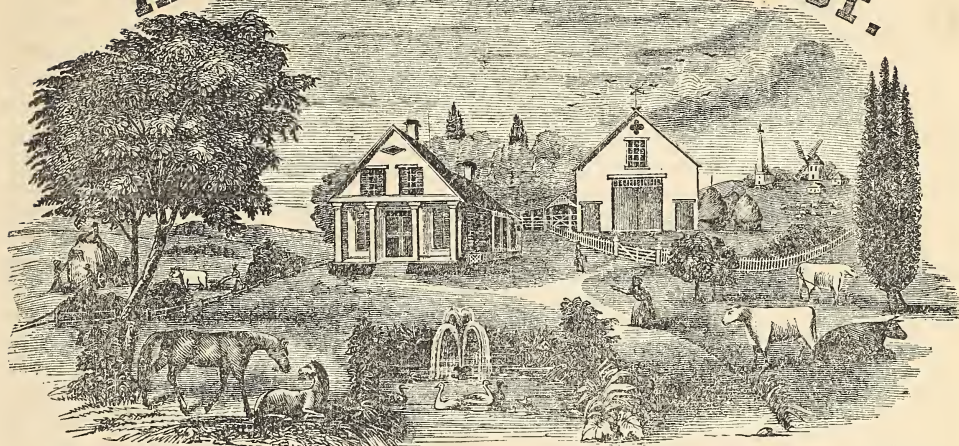
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REVIEW OF PROFESSOR JOHNSTON'S NOTES ON AMERICAN AGRICULTURE.

In the *Edinburg Quarterly Journal of Agriculture* for September, is published Professor Johnston's *Notes on American Agriculture*, from which we clip such passages as appear most worthy of comment, and upon them express our opinion freely without noticing the other portions.

The first part of the following extract is what we might naturally suppose would be the most surprising thing to an Englishman; that is, our "horrible slovenliness" in farming; and the balance describes some of the beauties of our self-taxing beautiful fencing system. The whole of the article, from which the extracts are taken, might be very properly headed, "English Opinions of American Farming." We hope the extracts will be read and duly considered for our benefit:—

"In noticing some of the peculiarities of American farms and farming, one cannot fail to be surprised at what has been termed the horrible slovenliness of American agriculturists generally. And first as to fences. They may truly be said to be of the rudest description. So far as we can recollect, we did not see a real good-looking English fence during our visit, and we have been in the best agricultural districts of the state of New York. We will describe one very favorite form—we may call it the zigzag fence. A number of wooden rails, or pieces of scantling, no matter how rough and crooked they may be, are first obtained. One rail is laid in the ground, then another is laid so as to form an angle with the first one, its end resting on that of the first. A third rail is then laid on the end of the second and forming an angle therewith; and the same is done with a fourth rail, and so on. Other loose rails are laid upon them until a proper height is obtained—this is generally four or five feet. The whole forms a peculiarly unstable-looking fence, but it is in reality very strong and capable of resisting considerable opposing force. The whole is upheld without the assistance of a single nail, or other fastening. It is this peculiarity, doubtless, that has caused it to be adopted. It is, however, obvious that, in its construction, a vast quantity of wood is uselessly expended. This, however, is of little moment in the interior, where wood is so plentiful. The farmers are very fond of this species of fence, ugly and cumbersome as it is. 'So stupidly attached to this form of fence are some old people, that when they build wall fences they build them in and out, in the same zigzag way that they have been accustomed to

do their rail fences.' As may be supposed, the gates in farms are quite in keeping generally with the rudeness of the fences. Posts are driven in on either side of the gateway; and in the inside of these, holes are cut at equal distances; in these holes, rails are inserted—of course loosely—all of which have to be removed when a cart, for instance, is required to pass through. Regularly hung gates are sometimes used; these are, however, rude enough in their construction. 'To balance a gate, you will see the topmost piece of timber extended five or six feet over the post to which it was attached. On this piece of timber, you will sometimes see a trough filled with stones, while at other times, a huge piece of wood is attached. It is needless to say, that, in all well-conducted farms, the fences, &c., are admirably constructed and arranged. This unfortunately is the exception, not the rule."

This is a modest description of the manner in which these, to us, familiar sights, strike the senses of a stranger. He might have told his readers that we pile up these zigzag fences sometimes sixteen rails high; that they rot down every seven years and have to be replaced at an enormous expense of toil; and that no agricultural people in the world are so severely taxed as the self-inflicted fence tax of the American farmer.

The enormous expenditure of time, money, and waste of lands, to say nothing of inconvenience of cultivation, occasioned by stone walls, seem to have escaped the writer's notice; and no wonder, when we consider how he must have been dazzled and confounded with the sight described in the next paragraph.

"But the fences and gates are not the only things displeasing to the eye of the scientific farmer. The appearance of some of the fields of a comparatively new tract of land is peculiarly odd. On clearing land, the trees are cut down some three feet from the ground; the stumps, thus left, are allowed to remain in the ground till they utterly decay. They are generally black and scorched looking; this is owing to their being burnt, which prevents vegetation from proceeding after the trees are cut down. This, as may be judged, has a tendency to preserve the wood for a much longer period than otherwise would be the case if allowed to remain unburnt. One enterprising farmer told us that he never burnt the stumps, but allowed them to remain to decay naturally. The period taken in such cases is ten years; when charred, much longer. The stumps, thus left, almost invariably burnt and charred, present a curious

appearance when they peer up amidst the green herbage surrounding them. A stranger, at first sight, is exceedingly apt to take them for diminutive cattle, or black sheep, scattered over the field."

The following is a description of land in the very best farming district of New-York state—the far-famed Genesee county. We give it here as it forms an admirable description of the slovenly confusion too often seen in the neighborhood of farms. We have toiled through such a place, in the heat of summer, within a gunshot of a farm house belonging to a farmer who was considered quite a scientific agriculturist.

"Weeds, and rough-looking grasses, and fallen trees, which seemed to have been rotting for ages; old stumps, some black and half-burnt, others grey and half-rotten. Trunks of trees, some ten, some twenty or thirty yards in height; some rotten and ready to fall; some sound, and some strong; some black and half-consumed by fire; some crumbling to pieces by decay; some split, some hollow, some fallen, some standing; some with their roots pulled up, but most of their roots in the ground; some amidst the grass, some in the orchards, some amidst the corn. Fancy such a scene and condition of affairs on an English farm!"

Fancy, indeed, it would be, for none can have any idea of the reality, until they have visited this or some other new country. Much of the appearance of things described is a necessary accompaniment of all clearings of forest land. One thing noticed is worthy of attention; that is, the burning of stumps prevents their decay, when decay is the very object sought. It is better never to set fire to a stump unless it is rotten enough to consume entirely, and even this may be considered doubtful policy, as the rotten wood is a constant source of fertility to the surrounding land. The same may be said of dead trees, however unsightly they may appear, particularly to an Englishman; they serve to keep the land fertile during their gradual decay. We even doubt the policy of burning piles of logs. If left to decay, which they will do in a few years, the residue is a mass of fertilising matter. Col. Williams, a planter on the Pee dee, in South Carolina, buries the logs instead of burning them, and finds his account in it. Many farmers are in the practice of picking up and burning all the chips and trash upon clearings. Better let them be and slowly decay.

Here is what the same sensible writer says of our farming tools, which shows that he is not like some of his countrymen. Aye, and some

of our own, so strongly wedded to their idols they can see no good in nothing else:—

"The agricultural implements in the United States are much lighter in construction than in this country, the plows particularly so. These are well adapted for the peculiarities of the land. It would be impossible to plow land recently cleared, with all the stumps and roots scattered here and there, with the heavy plows of this country. It is astonishing to see how easily the farmer turns aside from the stumps; and even should he fall foul of one, the plow is so light, that he can *fillip* it past the obstruction very easily. Old-country farmers are disposed to find fault with them, but they are soon taught to perceive that they are very well adapted to the kind of labor they have to perform. With reference to other implements, the same rule holds. The hayforks are amazingly light and handy—a young boy can easily use them. Scythes, hatchets, &c., are all made exceedingly light and portable, and in this, we think the Yankees show real wisdom. There is no real utility to be gained, by having huge, heavy instruments to deal with. A farmer who had had, both in this country and in America, much experience as a hard-working man, told us that the result of his experience, was, that more work could be done in the same space of time, and with less fatigue, with the Yankee tools than with those of this country. The axes used for felling trees are very light; we must confess that, at first sight, we thought that heavier heads would have been better; but a sight of the execution they performed in good hands, on the sturdy sons of the forest, soon showed us our mistake. The horserake is almost universally used for gathering the hay off the fields, and forming it into cocks. There is scarcely such a thing as reaping grain by hooks, as here performed, the common scythe, or more generally the cradle scythe, being used. It is astonishing how much one man can cut down in a day. There is great rivalry in this point amongst farm servants."

The following extract will delight many a Yankee boy whose pride is to exhibit the handsomest and hardest yoke of oxen at the "Fair." We really wish this extremely intelligent traveller and commentator upon our farming operations could be present at some of the great shows of working oxen—a class of domestic animals with which we can challenge the world for competition, both in beauty of form and matching, as well as their wonderful docility and strength. He might then witness feats worthy a well-trained pair of horses and skill-

ful driver. The writer is a little mistaken in the assertion of the first line, as in some parts of the country oxen are rarely used:—

"Oxen are invariably used for farm purposes, carting of hay, &c. Some of these animals are really wonderfully well paired. A friend of the writer's had a pair so beautifully matched, so alike in every respect—color, size, and even shape and length of horns—that it was difficult to distinguish between the two. The same farmer had a young pair which he was rearing for the purpose of exhibiting at the great State Fair; their color was pure white. We believe he gained the first, (or one of the first,) prizes for well-matched oxen."

It is the pride of exhibiting the premium oxen, much more than the premium, which makes the first lines of the following paragraph so full of truth. The description of a Yankee cow stable will be new to many of the London readers, and as little interesting as it may be to those so familiar with such things "to home."

"Farmers vie with one another in rearing handsome, well-paired oxen. Much more attention is paid now than formerly to the rearing of stock. The cow houses are all constructed of wood, and have arrangements for feeding and housing, very peculiar. In the centre of the house, there is a division railed off on each side; on this wall, or central alley, the fodder is placed. The cattle are ranged on either side. By lifting up pieces of wood, placed in these rails, space is made for allowing the animal to insert its head and neck so as to partake of the fodder within the inner division. The piece wood is let down, thus confining the neck and head of the animal in one position till released. The cattle seem to have no objection to this kind of restraint."

The following tribute to American horses is truthfully graphic, but cannot convey to the mind of the owners of the slow-gaited heavy road or farm horses of England, a just idea of the excellence of our light-footed, lively and most excellent animals. The way they are used as described in the last sentence is enough to tell the story of the unsubduable spirit of American farm horses, to say nothing of the same quality in the younger branches.

"The horses are invariably slender, and at first sight, a European fancies they are too much so to do much heavy work. This is not the case; they are high spirited, and capable of undergoing much fatigue. They are used for all kinds of work; no such thing being seen, so far as we remember, as horses kept for one

particular kind of jobbing. After a hard day's work in the fields, the spirited animal is glad to have a run of ten or twelve miles harnessed to a 'buggy,' conveying perhaps the younger branches of the family to a frolic in the neighborhood."

Some of the statements of the next paragraph we are disposed to correct. In speaking of American farm houses, the writer says:

"They are generally made of wood, placed in some cases on low stone basements to protect them from the damp. They are commodious, and generally well arranged; the kitchen is always the largest apartment in the house. The most striking external peculiarities of American farm steadings, is the long range of wooden outhouses, and the entire absence of all appearance of grain, &c. The former is caused solely from the fact that the corn, hay, and in fact all crops, are housed, not made up in stacks as here done. This custom necessarily requires large and commodious outhouses to be constructed."

INTERCHANGE OF VISITS AMONG FARMERS.

WE wish the farmers of the United States were more in the habit of assembling together, and interchanging visits with each other. We are certain it would be for mutual advantage to do so. They would thus become sooner acquainted with each other's improvements of different kinds, which would be of vast benefit to them, as a class; and then, how agreeable an increased social intercourse might be made. The farmer, now, is altogether too isolated; and this is the reason he is so generally behind the mechanic and manufacturer in adopting the improvements which they so eagerly seize. See from the following example of Mr. Mechi, how they manage these things in England.

"On Tuesday last, several hundred gentlemen assembled at Mr. Mechi's farm, to pay it a visit of inspection. They came from every part of the country, and were, in all respects, fit people for such an occasion. They were large farmers, intelligent land agents, and enterprising, liberal proprietors. The church was worthily represented by the presence of half a dozen clergyman, and Messrs. Ransome and May, of Ipswich, and Mr. Crosskill, of Beverly, were there to see that the farm implements were what they should be. With a long train of curious and interesting agriculturists, Mr. Mechi visited every field on his farm, sometimes skirting along the headlands, sometimes dashing through the centre by the help of a water furrow,

and still the concourse poured on their way, and listened to the animated explanations which their inquiries drew forth. Often amidst the tall crops of wheat, their heads alone visible over the waving mass, were knots formed, and rapid discussions carried on, with reference to matters of practical detail. At one moment the virtues of box manure were discussed; then the expediency of growing wheat oftener than by the present systems of cropping; then the merits of thin sowing; then the efficacy of thorough draining on stiff clay; then the proper method of securing deep disintegration, and a fine tilth. On all these topics, the changes of conversation rung; and, amidst them all, ran an under current of commentary and calculation on the amount of produce which each field would yield. It was confessed on all hands that the wheat crops were splendid ones. For the last six years, Mr. Mechi has grown wheat alternately with green crops every second year, and he expects, as the result of the present harvest, a return of five quarters to the acre. His show of beans, potatoes, clover, mangold wurtzel, and turnips was also very creditable to him. On the second-mentioned crop, he took occasion to point out its remunerative character, and the prejudices which existed against it, while, with reference to the last, he dilated, as the result of his experience, on the virtues of superphosphate as a manure. Mr. Mechi has a hearty contempt for the fallowing system which prevails so extensively in Essex, and especially in the district called the 'roothings.' His idea is, that the land should be deeply stirred, kept thoroughly clean, and be maintained in constant and high cultivation."

There, now, this is exactly what we like; and when we get on our farm again, we intend to invite all our neighbors, far and near, to come and see us occasionally. We will give them a plain lunch of bread, beef, and cheese; and then we will walk out and show them our grass, grain and root crops; our implements and method of using them; our flocks and herds; our orchards, groves, &c. Many are the good hints, in the way of improvement, that we should get from our visitors, we have no doubt; and perhaps some one among them would now and then pick up beneficial ideas from our management, or what we might have to show them.

There is nothing like stirring the waters to keep them from getting stagnant; and there is nothing more pleasant nor improving, than for farmers, gardeners, clergymen, lawyers, doctors, mechanics, and country gentlemen, living on their fortunes, to meet together occasionally

and look over each other's doings, and have a good social chit chat about them.

BAD FARMING.

Sowing wheat upon land without plowing is considerably practised in various parts of the United States, particularly in the south; the seed being covered with a very light plow which merely scratches the surface. This is *bad farming*. How can a crop be expected when thus put in? It is contended by the advocates of this labor-saving crop-losing system, that land, which has borne a crop of corn and peas, and been fed off by stock, is always *clean* and fit to receive the seed. True, but being clean is not all that is required to make the young plant grow. Fresh, newly-pulverised soil is as essential to give the seed life and power to vegetate, as it is necessary to pulverise the grain for the use of man, to enable him to obtain the full supply of nutriment from the life-giving substance, when properly fitted by grinding and mastication to be taken into the human stomach. No matter how *clean* your ground may be, never sow the seed upon it, before it has been previously well prepared by the plow—the most important machine ever invented by man.

Planting corn, before plowing the ground, is another instance of very bad farming. This is also much practised at the south. The land is *listed*; that is, marked off for the rows by turning a couple of very light furrows together, leaving the centres to be broken out after the corn is planted. One half of the labor of tending a crop, to say nothing of its increased quantity, might be saved, if the ground were well prepared before planting. The excuse for this slovenly plan is this: The planter says he can tend more acres than he can plow previous to planting, and it is important to get the seed in the ground and do the plowing afterwards. The plan may produce him more corn, but we doubt it. If the ground were well prepared before planting, it would require less labor afterwards, and undoubtedly produce more to the acre.

These hints are not all intended for the south; northern farmers are guilty of bad farming, also. We have seen many hundred acres of oats sown before plowing and then plowed in. A very common practice, is, to sow oats on corn stubble, first *splitting the hills*, by running a furrow through them with a one-horse plow. In this case, one half the seed falls upon a surface as unfitted to promote vegetation as a brick pavement. In turning this over, many of the seeds are buried beneath the clods and lost forever. If you desire good crops, you must use

good tools—yes use them—plow deep—pulverise the soil—fit it to produce a harvest, and it will never disappoint you, except in an occasional visitation of some unavoidable circumstance that Providence may inflict upon you.

Neglecting to set out fruit trees, is another evidence of bad farming, which pains the eye of every observing traveller in America. With the best fruit country in the world for the most substantial and important kinds, we have thousands of farms as destitute of a good apple, pear, peach, quince, plum, cherry, or currant, as though God had forbidden them to grow and gladden the hearts of men in this fertile land.

Another evidence of bad farming is, the neglect of that great source of comfort and luxury to every farmer's family—the kitchen garden. But where shall we stop with our evidence? We will do it here and submit the case to the judgment of an improving community.

ECONOMY IN HUMAN FOOD.

MANY persons are unaware of the great difference of nutritious matter contained in different articles of food in daily use. One might distend his stomach like a bladder, upon turnips and yet have very little to sustain life or give him strength to labor. Potatoes contain much more nutriment than turnips, but nothing like the proportion, according to bulk or cost, that is contained in many other substances used as human food. The figures annexed to the substances named below will show the relation they bear to each other and the proportion of nutritive matter that each contains in 1,000 lbs. of the raw material. For instance, 1,000 lbs., of winter wheat contain 955 lbs. of human food; spring wheat, 940 lbs.; blighted wheat, 210 lbs. to 650 lbs.; barley, 940 lbs.; oats, 743 lbs.; rye, 792 lbs.; beans, 570 lbs.; dry peas, 514 lbs.; potatoes, 230 lbs.; red beets, 148 lbs.; white do., 136 lbs.; carrots and parsnips, 98 lbs.; common turnips, 44 lbs.; Swedish do., 64 lbs.; cabbage, 73 lbs.

By this, it will be seen that it is poor economy to purchase many of the coarse kinds of food in common use. Potatoes must be considered articles of luxury rather than cheap diet, when they bear a price per pound almost equal to wheat, rye, beans, and peas, to say nothing of Indian corn, the relative proportion of nutriment of which we are not able at this moment to give; but at the average price it bears among us, we are convinced it is the cheapest food grown in America.

There is a great want of *tact* in many housekeepers about economising food. At present pri-

ces, sugar is an economical as well as a healthy article; but when properly combined with flour, meal, or fruit, which are more economical than bacon and cabbage, it is generally acceptable to all palates. We have just read an article in the Cincinnati Atlas, of the *tact* of a poor woman who found herself entirely destitute of food or means to procure it to feed herself and seven children, with the exception of eight laying hens. One egg a-day would not fit the human frame for labor if it would sustain life. Here was a case for the exercise of tact. Six eggs would exchange for half a peck of beans each day, and these made into soup, with a little piece of cheap meat, obtained with the other two eggs, served to feed the family very comfortably until Providence, who always helps those who help themselves, should provide something better.

This woman in working her way through the difficulties, has taught her children a lesson of economy and manner of providing for themselves out of small means, well worthy the attention of thousands who may be now well-to-do-in-the world, and perhaps think they have no need of learning such severe lessons of economy. We hope that may be the case, yet who shall say? Let the lesson be learned and practised, if circumstances ever require.

A FACT IN DEEP FLOWING.

HAVING been for a long time an attentive reader of the Newspaper, especially the farmers' department, and having seen many articles on the cultivation of corn, I have concluded to give you my experience for the last two years. Previous to that, I had followed the old plan of shallow plowing and high hilling. Now for the other way. In the spring of 1849, I took five acres of ground that had wheat on it the year before, and had for a number of years been rather hard run by sowing in wheat one year and planted to corn the next, until the surface soil was worn so low, that twelve bushels of wheat and forty or fifty of corn were an average crop. On the five acres, I put eighty-seven loads of barnyard manure, the greater part of it straw, only partially rotted, and plowed it as follows:—Taking two teams and two plows, I began by a furrow seven inches deep with the first plow, then followed in the same furrow with the other plow, turning another furrow six inches deep, making thirteen inches of soil turned. I then harrowed and marked it making the rows four feet apart both ways, and planted on the 22d of May. As soon as the corn was large enough to follow the rows, I cultivated it out

both ways, and had a man to follow with a hoe to set up the hills that were partially covered up. I went through it twice afterwards with the cultivator, but made no hills, leaving the surface as level as possible. I cut it up the 17th of September, and from the five acres, husked seven hundred and six bushels of ears.

Now, I don't call this a brag crop, for I am well aware that it can be beat; but it shows the difference between half doing work and doing it well. The corn was hauled off and the ground sowed to wheat, being plowed as deep as a pair of horses could plow it; and from the same ground, I have this year harvested and threshed one hundred and ninety bushels—thirty-eight bushels to the acre. I have managed my corn ground in the same manner this season, and from present appearances shall have as good a crop as I had last.—*Dollar Newspaper.*

RAISING GEESSE.

A GOOSE is more easily raised than any other domestic bird of our experience. Here is the simple course we pursue: Feed the geese kept for breeders, moderately well all winter with a mixture of grain and boiled roots. Provide a warm, dry, well-sheltered place for sitting; and when the goose is on the nest, give her regular daily food, principally of cooked vegetables, lest she should get costive, and plenty of fresh, clean water. When sitting, a goose does not eat nor drink so much as ordinarily. If she inclines to come off the nest, let her do so; and even let her go to the water and swim and dive to her heart's content. She is only taking a necessary ablution; and as to the idea that she will get wet and chill the eggs on her return, it is all nonsense. Who ever saw moisture adhere to the feathers of a well-fed, healthy goose?

After the goslings are hatched, let them run with the goose on grass, but be careful that they are not exposed to wet, the first week of their existence; after that, there is little danger, unless the rain be particularly cold and enduring. With a small allowance of boiled vegetables, mush, or oats, the flock will do well the first fortnight; after that, they will subsist almost entirely on grass and in the water. In the fall, feed well with boiled vegetables and grain, and they will soon be sufficiently fattened for the market.

In order to guard against rats, minks, weasels, and other vermin, the goslings should be penned every night, till nearly half grown, within a tight board or iron-wire fence, (the latter is much the best,) about three feet high. Be par-

ticularly careful there is no hole in nor under the fence, that a rat or weasel can crawl through; and the fence must be so constructed that they cannot climb over it.

POTATO ROT.

THE potato crop has suffered much this year from the above-named malady. I have visited many fields, before and during the season of harvesting, in different sections of New Jersey and also in Orange, Dutchess and Westchester counties in New York, and as far as my observations go, I do not think there will be over half a crop. The Mercers have suffered more than any other variety, being an entire failure in the same field with others which have turned out sound.

I planted this kind and gathered about one half of a reasonable crop more or less affected. These I spread in sheds and stables exposed to the air, and commenced boiling such as showed signs of decay. I mashed them by pounding down in a hogshead, sprinkled with salt, and commenced feeding them to hogs and cows; and they ate greedily of them when mixed with ground feed. In this way, I saved them all and there are still some on hand as sweet and fresh as the day they were packed. About two thirds of the whole gathered, showed signs of decay and were thus cooked; the remainder are sound and fit for use.

I mixed charcoal with the compost of a small portion of the ground planted; where this was done, there was no rot. SAMUEL ALLEN.

HARVESTING TURNIPS.

PULLING turnips and cutting off the tops by hand and knife, which is almost the universal practice among American farmers, is about as far behind the age of improved husbandry as digging up the land with a hoe, instead of plowing. In England, turnips are almost invariably planted in drills; at pulling time, the laborer passes along the row with a sharp, light hoe, with which he dexterously cuts off the tops, throwing them by the same motion, into the hollow between two rows. Another person follows with another hoe, which he strikes below the bulb, so as to cut off the tap root, throwing the turnips of two rows together, ready for the gatherer to basket and carry to the pile or cart for storage. Sometimes one hand performs both operations of topping and digging, but two work to the best advantage.

Great skill is acquired by practice in cutting the tops, as well as dexterously raising the roots.

NEW-JERSEY FARMING.

Draining Land—A Big Ditch.—In our November number, we gave some account of the farming operations of Mr. Buckalew. We have a few more notes of his successful improvements. Near his house, he has a saw and gristmill upon one of those beautiful gravelly-bottomed streams which abound in that state. Below the mill, this stream winds its course through a timbered swamp of some hundred and fifty acres, every bend and fallen tree obstructing the course of the stream, so as considerably to injure the water power, besides keeping such a large tract of rich land lying worse than useless.

This state of things was not to be endured by one possessing such an energetic disposition to make improvements as Mr. Buckalew, and he at once determined to clear and drain it. This Herculean task, he has nearly accomplished, by cutting off the timber, wood, and lumber, which almost paid for the labor; and then straightening the creek by a ditch a mile and a half long, twelve or fourteen feet wide, and six feet deep. This had the effect not only to drain the land, but greatly add to the value of his mill property. Into the big ditch, he is now cutting side ditches, and some of the swamp has become dry enough for grass, and the whole undoubtedly is now the best land upon the farm. The excavation from the ditch was a mass of vegetable fibre which makes excellent manure, when composted, and is very beneficial when used just as it comes from the swamp. Altogether, this is one of the greatest undertakings in the way of swamp draining that has lately come under our notice. There are thousands of acres in New Jersey which might be treated in the same way.

Benefits of Railroads to New Jersey.—No state in the Union has been more benefitted by railroads than this. Had it not been for the Amboy Railroad, Mr. Buckalew would probably never have cleared the above-mentioned swamp, because the wood and timber would not have been of sufficient value; neither would those 60,000 peach trees ever have been planted, because this fruit would have been quite worthless. Land, which was once considered of no value, is now highly estimated, because the railroad gives a market for everything grown, at almost city prices at the very door of the farmer.

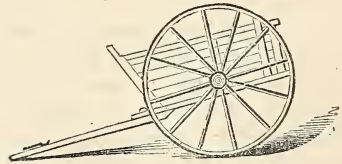
The advantages of railroads to agricultural improvement are never duly estimated. San-guine as were the original projectors of the Amboy road, that it would be a great passenger thoroughfare, they never imagined how much benefit it would be to farmers, or what wonders

it would do to improve the agriculture of the country.

Mr. Buckalew related an anecdote in point to this effect; that when it was first talked of putting a freight train on the road, one of those shrewd gentlemen, the Messrs. Stevens, thought such a train could not be supported—that perhaps one car a-day might find employment. This conclusion was perfectly natural to one who knew what a miserable tract the road was located through. But what a change a few short years has made. During the past season, it has hardly been in the power of the company with the best-furnished road in cars and engines in America, to keep the depôts clear of freight. It is a subject worthy of serious reflection.

ADVANTAGES OF LARGE WHEELS TO HORSE CARTS.

The advantages of large wheels to horse carts, are obvious, as they greatly increase the facility of draught, and tend to lessen the number of accidents to which all two-wheeled carriages are liable, from the shaft horse falling down.



LARGE-WHEELED HORSE CART.—FIG. 1.

By adopting large wheels, and a bent axle, as denoted in fig. 1, the cart becomes less liable to such accidents, as the centre of gravity, (the fore end of the cart body,) and the centre of suspension, (the axle,) are brought much nearer together, the former being placed nearly over the latter, at a small distance only from it. A horse falling with a loaded cart so constructed, will experience but little increase of weight upon him while down. The centre of gravity will be thrown forward, but in a very trifling degree. In carts, &c., it will almost always happen that the centre of gravity will be above the point of suspension (the axle); but in gigs, &c., the body may be placed so low that the centre of gravity may fall below that point when the body will always maintain the erect, (that is, a horizontal,) position, and should the horse fall down, will operate to lift him up again. A gig so constructed would be almost beyond the possibility of those serious, and frequently fatal accidents, which occur from the falling of the horse.

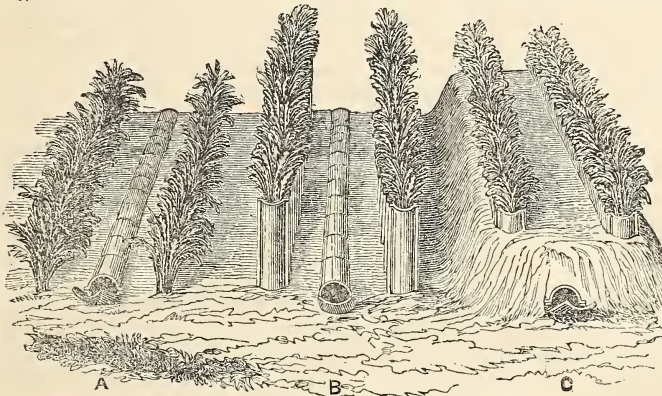
CURE FOR A FOUNDERED HORSE.

HEAT a tubful of water to the boiling point, and bathe the legs from the fetlocks up, as hot as it can be applied. If rubbed downwards, it will take off the hair, if the water is used as hot as will be beneficial. Now wrap the founder leg in a thick blanket, well bound on, and saturate it with hot water, being careful to wet it from the bottom upwards. In two hours, repeat the operation, and continue until the swelling is removed.

A good purge for the horse during the application will be sage tea, made strong, molasses, and melted lard, each one pint. If the founder is very bad, bleed in the neck. You need not fear scalding the hair off, if you follow directions. This is worth the price of the Agriculturist a dozen years.

NEW PLAN OF GROWING CELERY.

MR. JOHN ROBERTS, 34 Eastcheap, London, has lately published a pamphlet, containing a new method of growing celery, with his patent socket tiles, which is represented by the following cut:—



ROBERTS' PLAN OF GROWING CELERY.—FIG. 2.

A, represents two rows of celery in the trench before the sockets are used, with the horizontal tube placed between them for the purpose of watering.

B, shows two similar rows with the sockets placed round each head of celery prior to earthing against them.

C, shows the celery earthed up, as it appears in autumn, previous to harvesting, or covering up for winter use.

WATERING CROPS.—Never irrigate grain nor any other arable crop, except lucern, unless it be while plants are growing, in the greatest droughts.

ECONOMY OF USING MULES.

It is still a mooted question which is the most economical for plantation purposes in this country, the mule or horse. Many use both, some use only mules and won't have a horse for ordinary work upon the place, while others will not have a mule; but as I stick to the latter, I propose to give some of my reasons for the preference, and a neighbor of mine who is altogether in favor of horses, has promised to answer me through the same medium, if you see proper to publish this communication.

According to my experience, in which I am backed by "Old Joe," who was an old man as long ago as I can remember, and for many years head man of my father's, mules live twice as long as horses at the same kind of work. We have mules now upon this plantation that have worked thirty years; that is, from three years to thirty-three or thirty-four, if I can depend upon the same authority above quoted, as he says they were bought the year I was born. Certainly there is one which has been called Old Joe's mule ever since I can remember anything; and he is a serviceable old fellow yet. He and

his old driver, now as free as his mule or his master, have both grown grey together; and it is sometimes a question with Mrs. W., when she looks upon the old man mounted in his car with three or four of our children, which he has the most affection for, his old mule or his young masters. But to proceed with my argument.

Instances are known of mules living sixty years, but that is probably as unusual

as for a horse to reach the age of thirty. I am satisfied they average twice the age of horses.

Mules are not so liable to disease as horses; as the great annual loss of horses all over the country will fully prove. I have been told the death of horses, in the city of New York, is so frequent, that many persons are procuring mules, and that some of the owners of omnibus lines have it in contemplation to substitute mules. How is it?

Mules rarely go blind, which cannot be said of horses. I was in Baltimore last summer, and it appeared to me that almost half the horses in the streets had lost their sight. The hearing of a mule is much more acute than that of a horse and from this fact, and that they see better

they are much less likely to sheer off or frighten at sight or sound of any object along the road side, which a horse does, because he imagines he sees or hears something frightful, while the mule, with his clear eye and quick ear, detects the truth at once. For this reason, a mule is surer footed than a horse, and is therefore greatly preferred by travellers over mountains and dangerous paths; and for the same reason, mules ought to be preferred for the use of ladies and children; and when well trained, are sufficiently spirited for all ordinary purposes.

Mules are able to endure the heat while laboring much better than horses. I have a very small pair which are nine years old, that I should not hesitate a moment to match against a pair of horses of the same age and double weight, to plow twice as much ground in one week of summer weather, to forfeit the team that first failed, the horses to be allowed just twice as much food as the mules. And this is no inconsiderable item in favor of mules upon a plantation, and still more where food is to be purchased; for it is a well-known fact that a mule will live and work well upon rations that a horse would starve on in a month. The enormous quantity of human food consumed by horses in this country, and more particularly in Europe, is a matter of serious consideration, and should be a strong argument in favor of substituting animals that would perform the same labor while consuming less than one half the food.

I could go on at great length with my argument in behalf of my favorite animal of all work, but I think I have said enough for a commencement of the controversy.

Please to continue to send the Agriculturist to all the subscribers on the enclosed list until ordered discontinued, as we esteem it the best paper of the kind in the United States.

N. WILLIAMS.

Nov. 9th, 1850.

CONVERSATION ABOUT DELAWARE.

Yellows in Peach Trees.—Our friend Colonel Johnson has been paying a visit to the Messrs. Reybold, the great peach culturists of Delaware. In a recent conversation, he mentioned many interesting particulars of his visit, one of which was the flourishing condition of one peach orchard that had been liberally dressed with ashes, one of the best applications that can be made to old or long-cultivated land. Upon the farm of the Hon. John M. Clayton, who by the bye has a most beautiful one on the Newcastle Railroad, he saw some very thrifty peach trees that had been saved

from the yellows by an application of fish oil, spread with a brush or swab, like paint, upon the stems of the trees. Our opinion, is, that any application which acts as a fertiliser, is beneficial in preventing diseases of trees, as it promotes a vigorous growth; and healthy trees are not so likely to be affected by the yellows nor any other complaint, as those which cannot find sufficient nutriment in the soil to sustain them in a healthy condition.

A Delaware Wheat Crop.—John C. Clark, a Newcastle-county farmer, where Col. Johnson visited, was engaged while he was there clearing up his crop of wheat, which he grew the past season upon one hundred acres. He had already measured 3,000 bushels, and has some remaining. Upon one field of thirty-seven acres, he had 1,410 bushels, good measure, of fine wheat; that is, forty bushels to the acre. Upon another field of thirty acres, he averaged thirty-five bushels to the acre. Mr. Clark's wheat is the Mediteranean variety, which is the favorite sort in Delaware and Maryland. There are but few wheat farmers in any part of the country who show a better result than this.

Reclaimed Marsh.—The Messrs Reybold have most valuable crops now growing upon lands that were almost worthless before being reclaimed from the dominion of water. Major Reybold had one of these tracts in cultivation many years ago until it lost its original fertility, and now suffered to be again flooded. Upon taking it in again, last year, it was found to have an accumulation of alluvium several inches thick all over the surface.

ICE PRESERVERS.—Every family needs an ice preserver; for it is not only an excellent thing for this purpose, but to keep meat, fruits, milk, and butter. Articles of this kind are made in New York, at prices ranging from \$10 to \$100. Ice may be kept in them several weeks, with a great saving of time. It is quite a loss to be obliged to open the ice house every day; and if we depend upon the daily calls of the ice cart, it costs twice as much as if we laid in a week's supply at a time.

PRICE OF PEACHES IN LONDON.—A London letter, of the 21st June, says: Peaches for the past week are more abundant than they have been for the previous month, and consequently at more available rates—varying according to quality, from 26 shillings to 30 shillings sterling, per dozen—equal to \$6.50 to \$7.50 United-States currency. They are of course raised, (like grapes,) in hot houses.

STEAM PLOWING.

WE subjoin some excellent suggestions from C. W. Hoskyns, on the subject of steam plowing, which we find in a late number of the *Agricultural Gazette*. That a wide departure is to be made from the present mode of plowing, whenever the steam engine shall be substituted, we have not the slightest doubt. There is a serious injury to the subsoil from the use of the plow, as there is a pressure upon it equal to the weight of the implement, the entire superincumbent furrow to be lifted, and the force required for dividing the uplifted mass of earth from the stationary portion below. In some fields that have long been subjected to cultivation, at uniform depth, the surface of the subsoil has nearly the density of a stratum of rock. This opposes a serious obstacle to the progress of roots, and materially lessens the growth and amount of the crop.

There is a conservative or counteracting effect produced at or near the surface, by the action of frosts and the elements, by which the particles of the soil are so effectually separated, that when dug from a hole and again, (however carefully and lightly,) returned to it, they fail to fill up the space before occupied. But we believe this is seldom the case with the subsoil.

The principle suggested by Mr. Hoskyns, has, as an experiment only, (for we are not aware of its adoption as a practical matter,) been for some years introduced into France and perhaps into England and elsewhere; and we have had a small cultivator constructed on the same principle, which, however, has justly failed to command any favorable attention. Thus we are left just as far from any utilitarian discovery as before. But to the quotation. Mr. H. says: I hold it to be an idea *fundamentally erroneous* to attempt to combine steam machinery with the plow. And I hope I am not presumptuous in repeating my conviction, that, until the idea of the plow and in a word, of all *draught-cultivation* is utterly abandoned, no effective progress will be made in the application of steam to the tilling of the earth. I repeat what I have said before, that plowing is a mere *contrivance for applying animal power to tillage*. Get out of animal power, and you leave plowing behind *altogether*. Get into steam power, and you have no more to do with the plow, than a horse has to do with a spade. It is *no essential whatever* of cultivation that it should be done by *the traction of the implement*. Spade work is perpendicular. Horse work is horizontal. Machine work is *circu-*

form of the hand flail in the threshing machine, or that of the oar in a steam ship, or of putting the piston rod to work at the lever end of a pump handle? Yet doubtless these bastard attempts were all made in their day, till the several inventors had come to see in turn that

" 'Tis good to be off with the old love
Before ye be on wi' the new !"

I am aware that I am repeating myself, unavoidably, in all this; but no one can imagine, without trying it, the difficulty of making the mechanical part of the question intelligible to the agriculturist, and the agricultural part to the machinist. The steam engine has no taste whatever for straight draught. He is a *revolutionist*, in the most exact sense of the word. He works by revolution; and by revolution only will he cut up the soil into a seed bed, of the pattern required, be it coarse or fine. And *that*, it is my firm belief, he will be seen doing at a handsome average, before a very large portion of another century shall have passed over our heads. Why should it not be? Why should not a strip, or lair, of earth be cut up into fine tilth *at one operation*, (and sown and covered in, too,) as easily as a circular saw cuts a plank into sawdust? As to employing a steam engine to turn a drum, to wind up a rope, to drag a plow, to turn up a furrow, and all this as a mere prelude for an after amusement to all the ancient tribe of harrows, scufflers, rollers, and clod crushers, to do supplementally the real work of cultivation, it reminds one of "the house that Jack built." One can hardly blame the iron ribs of any respectable boiler for bursting at the first pull at a task so utterly at variance with every known law of mechanical advancement, so offensive to the economics, I had almost said the very ethics of the steam engine.

I trust I may be forgiven for so boldly speaking; but I am sorry to think of one useful shilling being thrown away in the attempt, unprofitable, even if successful, of harnessing steam with horse harness, to do horse work in a horse's way; the implement itself, whose wretched work it is put to accomplish, being a tool with the sentence of death written upon it, (be it as ancient as it may,) for its tyranny to the subsoil, which bears the whole burden and injury of its laborious blundering path.

I say the plow has sentence of death written upon it, *because it is essentially imperfect*. What it does is little towards the work of cultivation; but that little is tainted by a radical imperfection—damage to the subsoil, which is bruised and hardened by the share, in an exact ratio with the weight of soil lifted, *plus* that of the

Whoever would now dream of retaining the

force required to effect the cleavage, and the weight of the instrument itself. Were there no other reason for saying it than this, this alone would entitle the philosophic machinist to say, and see, that the plow was never meant to be immortal. The mere invention of the *subsoiler* is a standing commentary on the mischief done by the plow.

Why then should we struggle for its survival under the new dynasty of steam? The true object is not to perpetuate, but as soon as possible, to get rid of it. Why poke an instrument seven or eight inches under the clod, to tear it up in a lump by main force, for *other instruments to act upon*, toiling and sweating and treading it down again, in ponderous attempts at cultivation wholesale—when by simple *abrasion of the surface* by a revolving-toothed instrument, with a span as broad as the hay-tedding machine, or Crosskill's clod crusher, you can perform the *complete work of comminution* in the most light, compendious, and perfect detail?

Imagine such an instrument, (*not rolling on the ground*;) performing *independent revolutions behind its locomotive*, cutting its way down by surface abrasion, into a semicircular trench about a foot and a half wide, throwing back the pulverised soil (just as it flies back from the feet of a dog scratching at a rabbit hole); then imagine the locomotive moving forward on the hard ground with a slow and equable mechanical motion, the revolver behind, with its cutting points, (case hardened,) playing upon the *edge, or land side* of the trench, as it advances, and capable of any adjustment to coarse or fine cutting, moving always *forward* and leaving behind perfectly granulated and precisely *inverted*, by its revolving action, a seed bed seven or eight inches deep, *never to be gone over again* by any after implement except the drill, which had much better follow at once, attached behind with a light brush harrow to cover the seed.

Why did steam reject the *pump handle and the oar*? Because in both the leverage is obtained by loss of labor and time, occurring during the back movement of the handle, a movement necessary to the manual, but not to the mechanical agent. For the same reason, whenever it is applied to till the earth, it will antiquate every instrument that *cultivates by traction*, because traction is not only unnecessary to cultivation, but is inherently mischievous on other grounds, apart from the clumsiness, inaccuracy, and incompleteness of the work it turns out.

But the stones! There is much fear express-

ed for the teeth of the circular cutting implement I have described, when they come in contact with stones. The objection would have been equally valid, at first sight, against the use of the plow or the scuffer. Let me see the instrument in use where there *are no stones*—(and there are plenty of broad acres in England of this class)—and it will not be long before it gets upon the others. If it cost five pounds an acre to clear them out, it must be done, and would in such case, well pay to do it. But the truth is, that the instrument itself suggests the kind of machine, which, with a little adaptation, (greater power and slower motion,) might perform this preliminary service at the least expense. If land is to be like a garden in one respect, I see no good reason why it should not in all. I do not think stones will stand long in the way of steam, nor be readily preferred to bread; if, *where there happen to be none*, a steam-driven cultivator can be brought to bear, which, after the simple and beautiful example of the *mole*, shall play out the long comedy of our present field cultivation in a *single act*, present a finely granulated seed bed by a single process, almost at the hour required, and trammel up the long summer fallow into the labor of a day, with an accuracy as perfect as the turning of a lathe, and an aëration, (and consequent oxygenation,) of the soil as diffusive and minute as that of a scattered mole heap, or the dust flying from a steam-saw bench.

Implement makers and mechanicians would not be long in understanding all this, if they were not under the supposition, received at second hand by them, and therefore the more difficult to eradicate, that plowing is a necessary form of cultivation to be kept in view. Once let them be made fully to perceive that plowing is merely the first of a long series of *means* towards the accomplishment of a particular end, that end being the production of a *seed bed*, of suitable depth and texture, and with the soil as nearly as possible inverted in its bed—and I do not think they will be long setting the steam engine about its proper task, in the proper way. But their attention is distracted, at present, from the end to the means. They are taught to think that the plow is a *sine qua non*—that steam cultivation of necessity implies steam plowing, and they are led to give up the task in despair, because they are at fault upon a false scent.

We have many *rolling* implements employed in the field, but we have only one instance of a *revolving* implement. The clod crusher and the Norwegian harrow *roll*, the hay-tedding ma-

chine, (one of the best instruments ever invented,) *revolves*. I use the words arbitrarily, but the difference I allude to is very important. The first are liable to the evil of clogging; because they derive their axis motion *from the soil* as they pass over and *press upon* it. This action must not be confounded with that of a machine which *has its cause of revolution within itself*, independent, and acting *upon* the soil as a circular saw acts upon a board, or the paddle wheel of a steamer, upon the water. The teeth of a saw clear themselves, by the centrifugal motion they communicate to the particles they have detached from the substance they act upon. A circular cultivator, steam driven, will do the same, for I have proved it. It does so more effectually according to the speed, (of revolution,) and the state of moisture of the soil. This last incident is at it should be; for it is not desirable that a clay soil should be dealt with when in an improper state for cultivation; and one great advantage of such an instrument as I point to would be that it would so greatly enlarge the choice of a suitable period, by its compendious accomplishment of the whole work of culture.

To illustrate still further the subject of steam plowing, we append from a late English paper, a description of a new arrangement with steam plows. We look, however, upon all these experiments, rather with the *wish* than the *hope*, that anything hitherto attempted will prove effectual for accomplishing the object.

The engine moves across the centre of the field on a light, portable railway. The plows advance and recede on either side of the railway, at right angles to it.

The plows employed consist of four ordinary and four subsoil plows, fixed in a frame. They are directed by a person standing upon a small platform.

Two such plows, one on either side the railway, alternately advance and recede; the advancing plow working, and the other idle until it regains its proper position for plowing the next four furrows. On the completion of the four furrows both ways, the engine and side frame advance each three feet.

The plows are attached to an endless chain, one hundred and fifty yards in length. They can be detached at pleasure, or shifted from one side of the chain to the other. They travel at the rate of *five miles an hour*. Provision is made in case they strike against any impediment.

Arrangements are made to suit irregularly-shaped fields and to increase or diminish the number of plows, if necessary.

In the present state of things, it is difficult to

form a correct estimate of the value of the invention in a commercial point of view. I will only say that a machine of the power, and with the arrangement described, would perform the work usually done by *sixteen* plows, driven by as many men, and drawn by thirty-two horses. Requiring itself the attendance of eight men, and a horse to draw the water for the engine, it would thus save the labor of thirty-two horses and eight men. Against this must be set an expense of five shillings a-day for coals.

LETTER FROM VIRGINIA.

I HAVE contemplated writing you for some time; but a farmer upon a new place has but little spare time to devote to letter writing. I say *new* place, because to me it is new, although it was in cultivation perhaps a hundred years ago. It is also new in another sense, because everything had to be created anew, except the dwelling, almost as much as though I had located on the western prairies, or the wild woods of the mountains.

The land now occupied by myself and two or three neighbors whom I induced to emigrate with me from New York, was once a fertile and very profitably productive tobacco plantation. Allow me to tell you what it was some years ago and what it is now. It was then a wild and barren-looking waste. Abandoned by the owner many years ago, the fences had all gone to ruin, leaving scarcely rails enough to mark their former location; the land nearly all grown up to old-field pines, persimon, sassafras, and broom straw. All the buildings in ruins except the dwelling, and that nearly so; the whole presenting a scene that required strong faith in the purchaser that his abilities would be sufficient to reclaim such an unpromising looking ruin. Of the soil, all concurred in assuring me that it was worn out and worthless; that it would not produce enough to keep the hands alive who planted it, and the only thing that could be done with it was to let it alone and grow up; in time, it might pay for clearing, &c. I found, on examination, the soil was a sandy loam with a subsoil of red clay; that it in all its former cultivation, had never been plowed with a stronger team than one horse, and of course a very light plow in a very shallow furrow which only stirred the surface. This determined me to risk a purchase of land esteemed almost worthless; land that would hardly support a single sheep to the acre. Of course, I could not manure it, and had to look for fertility in the soil or rather below what was termed such. This I did with one of your No. 19 plows, set as deep as four

good stout Virginia Yankeised oxen could pull it. I would have employed a larger plow than that, but did not like to risk it at first, and besides, I could not afford a heavier team. All who saw my first attempt, even the negroes, were sure I was crazy. The result proved I was not quite so. I cradled the best crop of wheat in all that section of country, and had my land covered with as luxuriant a crop of clover the next season as I could wish. Upon this, I sowed a bushel of plaster to the acre, the effect of which, if possible, was still more astonishing to those who came to look, than was the fact that fifteen bushels of wheat to the acre had grown upon that old broom-straw field.

I have since continued steadily every year to add a new field to my cultivation, and by means of lime, ashes, plaster, clover, and manure that my increased crops have enabled me to make, I have rendered a barren waste a fertile spot; supporting herds of cattle and flocks of sheep, and affording sustenance and happiness for many human beings. My great engine of improvement has been the plow—such a one as never was used upon this land before, with which I have turned up the red clay, and in some cases used the subsoil plow, so as to get a mellow tilth from ten to fifteen inches deep.

Since I first settled here, there have been large accessions to our then small society of northern farmers, and some of the farms, so far as regards the appearance of buildings, particularly barns, and clover fields, with cattle and sheep, grazing, have all the appearance of New England or New York. The change is very great. Sheep are driven here in considerable numbers from New York; and cattle from the valley of Virginia and Kentucky and fatten upon our rich clover fields. If some of the breeders of Durhams and Devons, at the north, would send us a few of their cattle to mix with ours, it might add much to improvement in stock. Why should we look to Kentucky for our cattle, when it is well known that we can breed as good ones in Virginia, by the aid of such as I saw exhibited at your late fair, as can be bred anywhere in the United States? We now have as good pastures as could be desired and very little winter. The market of Washington City is not only good for beef, mutton, butter, and flour, but everything that can be grown for the sustenance of man or beast. We now have schools and churches convenient, and there is a vast improvement in roads going on every year, and the day is not far distant when this region of poor, old, worn-out, despised Virginia plantations, will be looked upon as one of the

most flourishing agricultural regions in the country.

I shall perhaps write you again upon this interesting subject of improving old, worn-out lands, of which all the southern states have an abundance. As I am not ambitious of notoriety, please to leave my name blank.

Nov. 9th, 1850.

STRING HALT—IS THERE ANY REMEDY?

NOTWITHSTANDING all that has been said and written on this subject, we have never met with a remedy; and we doubt very much whether it is in the power of veterinary practice to cure it. The only thing, then, is to treat the horse thus afflicted kindly, and have patience with him when he first starts; for, after travelling a little distance and getting warm, the nerves seem to be relaxed, and ordinarily he does not then mind it.

So far as our experience goes, we have found string halt seemingly unaccompanied with pain, and it is not therefore to be so much regarded as some other diseases. Nor where it exists in a moderate degree, do we think it affects either the strength or speed of the horse. A little care only is necessary that he does not get cold in his limbs, as this aggravates the disease. We have also found that it was less apparent in warm weather, particularly when the horse was running in pasture.

It is often asked what is the cause of string halt? Professor Spooner seems to be of opinion that it is a morbid affection of the sciatic (hip) nerve; for he asserts that he had never dissected a single case in which he had not found disease of this nerve, which mainly contributes to supply the hind extremities with sensation, and the power of voluntary motion. Others think that string halt comes in consequence of the muscles of the thigh being injuriously affected; but we have never heard of a case of dissection in which it was shown that string halt had produced any change in the muscles; we are therefore inclined to agree with Professor Spooner, that it arises from some injury to the hip nerves. Owners of horses affected with string halt, who would consult their own interest and avoid tormenting the poor animals, will refuse all the quack nostrums offered to alleviate this hitherto incurable disease.

CHEAP BLACKING FOR HARNESSSES.—Melt two ounces of mutton suit with six ounces of bees' wax; add six ounces of sugar candy, two ounces of soft soaps, and one ounce of powdered indigo; melt and mix well, and add a gill of turpentine. Lay on with a sponge, and polish with a brush.

SALT FOR CATTLE AND SHEEP.

THE following article is extracted from "Travels in France," published more than fifty years ago; but none the worse for its antiquity. The question is yet a mooted one, how far salting stock is conducive to their health, or necessary to promote their growth, or dispose them to take on fat. If any of our readers have any arguments in opposition to the doctrine of the ancients in regard to salting stock, let us have them in as concise a form as practicable:—

One of the most singular practices in the eyes of an Englishman, that is to be met with abroad, in the management of sheep, is the regularity with which salt is everywhere given to their flocks, and also to cattle. The practice is of great antiquity. The ancients were in a regular practice of giving salt to sheep. Columella tells us, that if the pasture for this animal were ever so sweet, yet it would grow stale to them, if they had not salt given in wooden troughs. It appears, from an imposition established so long ago as 1462, in the Milanese, that the annual consumption of salt is reckoned at 28 pounds for each head of cattle. In France it is conjectured to amount to 50 pounds, and for sheep to 15 pounds, where the sale of it is free. The same author mentions it as a known fact, that cows give the more milk for it; sheep finer wool; and that all animals are kept by it in good health. In some of the articles of instruction to the deputies in the National Assembly, salt is considered as essential to the well being of cattle, indispensable to all beasts. M. d'Aubenton directs one pound every eight days to twenty sheep. In Spain it is as common as it is in Italy and France; a fanega of salt, or 100 pounds, is allowed for 100 sheep, by law; but they use 15 and 20 fanegas for 1,000 sheep. In a memoir on the Spanish flocks, by the late Mr. Collinson, the account is more particular and curious. 'The first thing the shepherd does when the flock returns from the south to its summer downs, is to give the sheep as much salt as they will eat. Every owner allows his flock, of 1,000 sheep, 25 *quintals* of salt, which the flock eats in about five months; they eat none in their journey, nor in their winter walks. It is believed that if they stinted their sheep of this quantity, it would weaken their constitutions and degrade their wool; the shepherd places 50 or 60 flat stones, at about five steps distance from each other; he strews salt upon each stone; he leads the flocks slowly through the stones, and every sheep eats to his liking. What is very remarkable is, that the sheep never eat a grain of salt, nor wish for it,

when they are feeding on land which lies on limestone; and as the shepherd must not suffer them to be too long without salt, he leads them to a spot of clayey soil; and, after a quarter of an hour's feeding them, they march back to the stones and devour the salt. So sensible are they of the difference, that if they meet with a spot of mixed soil, which often happens, they eat salt in proportion.' The practice is found equally in Germany; the late king of Prussia, by ordinance, expected his peasants to take two *meben*, (nine pounds,) for each milch cow, and one *metze* for every five milch sheep, and half as much for such as do not give milk; [a very sensible practice, that ought to be followed in this country.—Eds.] and in Bohemia the high price of salt is found very prejudicial to the flocks. The Hungarian peasants lay pieces of rock salt at the doors of their stables, cow houses, &c., for cattle and horses to lick. It is practised, also, in Poland. Throughout all North America, salt is given to cattle and horses once a-week. Paoletti, a practical Italian writer, orders one pound to each sheep in autumn, and another in spring. M. Carlier decides against it, but on very insufficient authority. M. Tesser unites with the common practice, by recommending it. This practice, which is unknown in England only, merits, I believe, much more attention than the English farmers are willing to give it, at least those with whom I have conversed upon this subject. I have tried it for two years past in my own flock; and though it is very difficult to pronounce the effect of such additions to their food, except after long and repeated experiments, I have, I think, reason to be satisfied, my sheep having been very healthy, and once or twice so, when my neighbors suffered losses.

FARMERS' CLUBS.

WE have often urged upon our country friends to form clubs for the discussion of matters in which they are particularly interested. The pleasures and advantages of these associations cannot be realised by those who have never tried them.

Mr. T. S. Gold, of Cream Hill, in Connecticut, writes us that last winter they had a club which met once a-week by appointment at the house of some member; taking care always to have the female members along with them, who usually occupied one room to discuss their own matters, while the lords occupied themselves in the discussions of the club in another.

One of the members acted as chairman or moderator, and called up every member in ro-

tation to speak to the question under discussion, or give some information about his peculiar manner of fencing, or keeping his stock or growing his crops, with the manner of plowing, manuring, &c.

In this way, much useful information is brought to light and many very pleasant evenings passed off during the long winter months. Of course, a few nuts, apples, and cakes, and sometimes a cup of tea add to the enjoyment.

We commend a great many other neighborhoods to follow the same course during the present winter, and increase not only their agricultural knowledge, but gather a stimulus to improve that which they already possess.

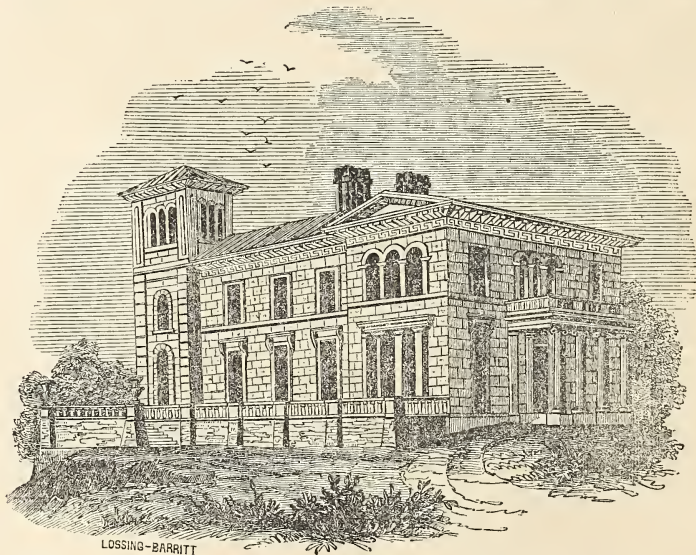
Short, pithy, reports of such discussions would be interesting to the readers of agricultural papers.

A NORTHERN COUNTRY HOUSE.

From an elegant, and somewhat expensive work entitled the "Palace of Architecture," we transfer to our columns the accompanying design of an Italian villa, in a modified style, which, for certain localities and pictorial effect, appears to be well adapted to our northern climate, as well as to the habits of our people, and would form an appropriate mansion for a wealthy gentleman in the country.

Taking its arrangement from its owner, its external features from modern Italy, and its complexion from Greece, it may be thus described in its own words: "I occupy an elevated site, having pleasing prospects to the south and east, with the opportunity, by some additional elevation, of commanding a panoramic view of the domain in which I am situated. Hence, the position of my two terraced fronts, and the existence of my prospect tower, at their angle of union. My roof is low, because I am frequently subject to violent winds; and it extends considerably beyond the face of my walls, to protect them from our heavy falling rains. To avoid the retention of collected snow, I am without parapets. My windows are sashes, sliding up and down, because there is great difficulty in making hinged casements, exclude

the damp and cold. My bed-chamber windows are preserved from much wet and noise by the projecting eaves of my roof. My lower windows are protected by their own cornices. Except to my entrance portico, I have no external columns; because it is impertinent in any house to exhibit them as mere ornaments, and I have no use for them elsewhere. They here support a flat roof, serving as a shelter for the carriage at my door and also as a balcony connected with 'my lady's chamber.' My terraces originate in the peculiar form of the surrounding ground. The required shape and arrangement of my rooms, prevented uniformity in my east and south fronts respectively; but, in the angular view, which includes these fronts, is seen a uniform composition, of which my tower forms the centre. My entrance front, you well observe, is perfectly regular in design. Thus I pride myself on the



A NORTHERN COUNTRY HOUSE.—FIG. 3.

variety of effects, which successively present themselves, as you walk around me.

"As to my style, it is not pointed Gothic, because the necessary form and construction of my roof and windows obstinately decline it. It is not Roman, because all my details are Greek. It is not Athenian, because I have arch-headed openings, and a Tuscan roof. What am I, then, but an English, [or an American,] mansion, adapted to any locality, and to the climate and customs of my country?"

BEAN STRAW should not be wasted. It is good feed for sheep, and they are very fond of it.

Pea straw, if cut green and well cured, is good feed for all kinds of stock.

WEST-HIGHLAND CATTLE.

THE West-Highland or Kyloe breed of cattle, has been known to exist in the Hebrides, and Highlands of Scotland, from time immemorial, and is undoubtedly one of the most ancient of Great Britain. They are of medium size and

the best for breeding, and by keeping them down to a medium size. All other methods would have resulted in disappointment; for if they were refined too much, they would be too delicate for their rough, exposed climate; and if made larger, they could not thrive on the

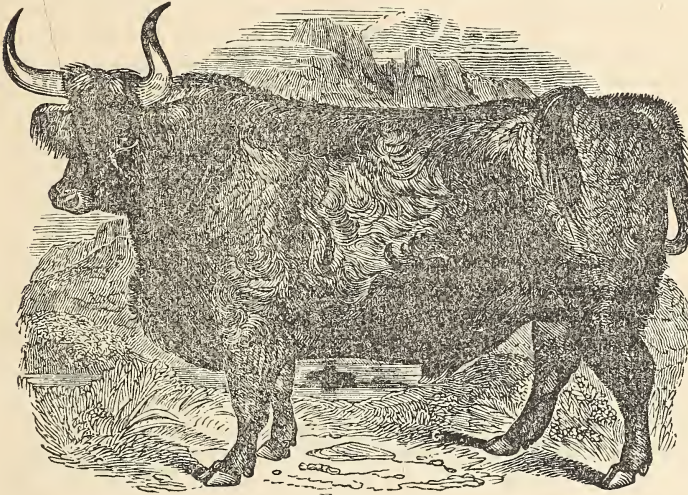


FIG. 4.

tolerably fine in their points; but their great superiority consists in laying on an uncommon quantity of meat, in proportion to their size, all along the crop, back, and loins. This meat is of a superior quality; hence their great value to the butcher and consumer. They are un-

fore going to the butcher. Their meat bears the highest price in the London market. It would be an excellent breed to introduce on the hill and mountain pastures of our northern states. The annexed cuts are kindly loaned us from Mr. Saxton's forthcoming edition of Youatt & Martin's history of British cattle.

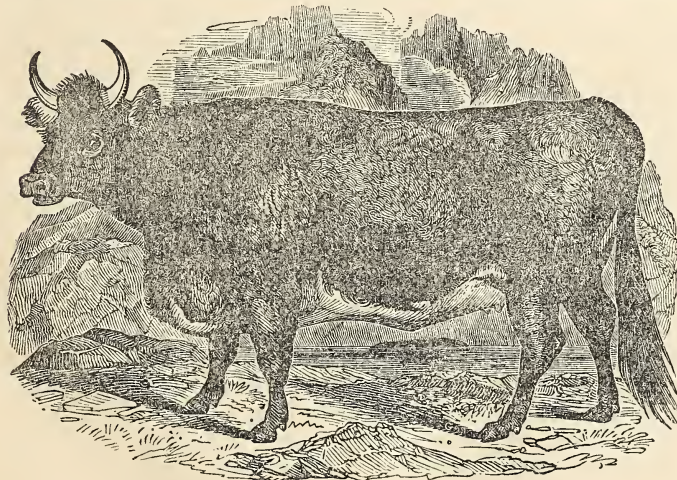


FIG. 5.

questionably one of the most profitable breeds of cattle known; for they are so hardy that they can be reared where others could scarcely exist.

Attempts have been made to improve the Kyloes, simply by selections from themselves, of

for it. The reason which the owner gave me for refusing the offer, was, that his hyacinth was known to all the amateurs in Europe, and that he sold the bulbs every year, for more than the interest of five hundred guineas."

poor, short pastures of the Hebrides and Highlands. Their hair grows very long during the winter, and proves an excellent protection for them in their exposed situation. The colors of this breed are generally pure black, red, or dun; a singularity common to no other breed of which we are cognisant. The Kyloes are usually bought up in large droves, at two or three years old, and driven into the south of Scotland and England; and there fed a year or two be-

THE PRICE OF A FLOWER.
—M. Dutens, a traveller in Holland, (we cannot ascertain the year,) says: "I was witness to a circumstance I could not otherwise have believed, respecting the price of flowers in Holland. I saw 475 guineas offered and refused for a hyacinth. It was, to be sure, the most charming flower that ever was seen. It belonged to a florist, at Hague, and another florist offered this price

OATS AN EXHAUSTING CROP.

VON THAER calculates the exhaustion of a soil upon an average at 25 per cent.; that is, each succeeding crop will be one fourth less than the preceding one, unless the loss is repaired by rest, pasture, summer fallow, or manure.

All culmiferous crops are exhausters of the soil, particularly so during the formation of their seeds. They are fibrous-rooted, spread themselves near the surface, and draw their nourishment principally from the upper stratum of soil.

It is apparent that we cannot take two or more such crops from the same field, in successive seasons, without a manifest falling off in the product. The reason of this, is, nature has provided for each species of plant, a specific food, suited to its organisation and wants.

VILLAGE LECTURES.—No. 3.

The Soil and the Air Continued.—Let me furnish other proofs of the fact that most of the bulky part of our plants is derived from the air. I have already proved it by showing that there is no other source except the air from which a plant can get its combustible part, and there are two other ways in which I can prove it—I can show you that the air is heavy enough to render it very likely that it contains enough of substance to grow plants of, and I can show you that it actually does contain the very things on which plants feed.

Why has the soil always been supposed to furnish the substance of plants? Is it because there is enough of it—good heavy stuff, that you might suppose able to build up heavy substantial plants and trees? Why the air surrounding the earth is at least twenty times as heavy as all the surface soil surrounding the earth—even supposing it to be on the average twelve inches deep? Though it is so easily moved through, the air is heavy enough, I can tell you. There are 15 pounds' weight of it resting on every square inch of ground. The whole atmosphere of the globe weighs as much as a ball of lead would weigh, though it were sixty miles in diameter. You can judge in some measure of the weight of the air by the way in which it will stretch a piece of India rubber extended over an open jar fitted to the plate of an air pump. If it were held at the four corners, and weights piled upon it, they would stretch it, and if heavy enough they would break it; but if it rested on a stool they could not. Just so the air above it cannot stretch it now, because it rests on the air beneath; but remove the stool and the weights will stretch it;

remove the air beneath, as can be done by this pump, and the air above will stretch it and burst through it.

But we can actually weigh the air. Take a bent tube, three feet long, filled with quicksilver, and invert it. Why does the liquid metal stand 30 inches higher in one leg than in the other. If the air were pressing on both ends alike, it would stand at a common level in both branches of the tube; the reason why it is standing so high here must be because there is something pressing on the one surface which is not pressing on the other—the reason why it is standing so high in the one side is because the air is pressing only the other. The fact must be that the weight of the air pressing on the surface of the metal in the one leg of the tube is just the same as the weight of quicksilver above that level in the other. The air is supposed to be forty-five miles high, and I say that supposing this tube extended forty-five miles high to the outside of the atmosphere, this leg would contain the same weight of stuff in it as that, or else the balance would not be maintained. This is in fact a balance, weighing whatever is put into one leg of the tube by the height to which it will raise the quicksilver in the other; the air pressing here raises the quicksilver there to a height of 30 inches; that is, the weight of air pressing on every square inch of the earth's surface is the same as if 30 inches deep of quicksilver rested on every square inch. Now, 15 pounds' weight of the quicksilver would rest on every square inch, if it were covered 30 inches deep with it; therefore, 15 pounds of air rest on every square inch of the earth's surface. If I let the air in on this end again, you will see that the quicksilver, (now bearing an equal weight of air on both sides,) will regain the same level in each side; so that this is in fact a measure of the weight of the air.

When made in a more portable and elegant form, it is called a *barometer*, from two Greek words which signify a measure of weight; and the height of the quicksilver in the tube indicates the weight of the air, which presses it up; and as dry air weighs heavier than damp air, when the quicksilver sinks in the tube we anticipate wet weather, and so this tube becomes a weather glass, and when furnished with a float on the surface of the quicksilver, it pulls round an index figure on a dial plate, and points to rain, fair, stormy, and so on; and this is the principle on which your weather glasses act. Well then we have just the same weight of air around the globe as if the surface of it

were covered thirty inches deep with quicksilver, and that is as heavy as twelve to twenty feet of soil would be; and if you were never astonished at the eight or ten inches of soil being able to grow repeated crops of grass or corn or trees without wasting under the process, surely you ought not to be astonished at the air, which is twelve or twenty times as heavy, being able to do the same thing. The leaves of the tree do not indeed stretch through the whole air in search of food, as their roots do through the soil; but then the winds are continually mixing the particles of air up and bringing fresh ones to be fed upon by the foliage of the plants and the trees, so that ought to be no hindrance in the way of our believing what is really the truth, namely, that plants get everything in them which will burn up from the air, and only their incombustible part—their ashes, which will not burn away from the soil.

But now I will prove to you that the air really does contain, in the midst of it, the very particles of which wood is composed. I have here a piece of wood dried at a red heat, under circumstances which hindered it from taking fire; it is a piece of charcoal in fact, which is nearly all that remains of the wood after the water is driven out of it. Now, I say that the tree got this charcoal from the air; first, because it could not get it from the soil, which has not anything near enough of the stuff in it, and the air is the only other thing which the plant could get at to obtain it from.

The argument merely proves that all the carbon in vegetables came *originally* from the air. It does not determine what portion of any particular plant came from the air, nor what from the soil. In the early stages of its growth, the plant derives a good deal of its substance from the soil, and some of even the carbonic acid of the air it may absorb through its roots. To supply the land with organic matter, in the art of cultivation, it is necessary, not merely for the mechanical effort thus exerted on its texture, but for its use as food in supplying the plant with a portion of its organic part.

Secondly, because the air is heavy enough—has matter enough in it to supply many such trees or whole forests, if they were wanted, from it—for it is many times heavier than the soil from which people generally think that such trees and plants do come. And, thirdly, I believe the tree gets its charcoal from the air, because the air is not only heavy enough, but it contains the right things, too; it contains the

charcoal particles of this black substance present in it, as I shall prove in my next lecture.

THE GREAT POULTRY SHOW AT BOSTON.

I LEFT New York, last evening, on the Vanderbilt—a very excellent boat—and a lovely moonlight passage I had through the sound; arriving at Stonington, at 12½, and at Boston, at 4½ A. M., over one of the best railroads in the Union, at a speed *almost* fast enough to satisfy Yankee go-ahead-i-tive-ness. Whether this is *the best* of all the routes between New York and Boston, I am not prepared to say; but I will say it is a good one, and as worthy of patronage as any other.

The first sound that greeted my ears, the morning of my arrival at Boston, was one united, concentrated, tremendous cock-a-doodle-doo; uprising in the clear morning air from some two thousand throats; with which was mixed a fair proportion of gander gabble and turkey gobble; with an occasional interlude, applicable to the occasion, of quack! quack!! quack!!! Whether there were any real *quacks* present I do not know. The din of hackmen and hotel runners, for once, was put to silence. "For a noise went up to heaven as of many cocks crowing." And that noise in imagination, is still ringing in my ears; for I have been all day wandering among the coops, trying to learn what magic influence—what *morus-multicaulis* miracle of speculation hath so wrought upon the sober character of this Yankee population; as thus to gather together such thousands of biped beings, feathered and featherless, in one great crowing match of all New England.

The exhibition is held in the public garden, west of the Common, under a mammoth tent, which covers 23,716 superficial feet—over half an acre. This is filled with coops, arranged in rows and tiers, containing an uncounted number of all manner of domestic fowls, variously estimated from 6,000 to 16,000. From the notes which I saw of one gentleman who undertook to enumerate the multitude, I am satisfied the smallest number comes nearest the truth. I am also satisfied that even this will be looked upon as an exaggeration, by those who were not present and who never felt *the fever*; because they will not be able to conceive how dreadfully that disease must rage through a community, to induce them to come together to the number of *three hundred and thirty-eight exhibitors*, with 6,000 head of cocks and hens, ducks and drakes, gobblers, ganders, geese, and Guinea fowls, in all sorts of coops and cages;

some of which could not have cost less than fifty dollars a piece, and were probably got up especially for this occasion.

The following memorandum of the coops and kinds exhibited by Messrs. Pierce & Osborn, of Danvers, Massachusetts, will give your readers a pretty fair idea of the various sorts kept by those who make a business of *chicken breeding*, together with the regular "trade prices." To commence with the tallest kind:—

Coop No. 1, contains Shanghaes. Price, per pair, \$4, of three varieties. Parsons, Perley & Forbes' importation.

No. 2, Black Spanish,	\$5 per pair.
" 3, Guilderland,	3 "
" 4, Rumpless,	3 "
" 5, Dominique,	3 "
" 6, Black Poland,	3 "
" 7, White, do.	3 "
" 8, Golden, do.	3 "
" 9, Golden Hamburg,	5 "
" 10, Spangled,	5 "
" 11, Singapore,	3 "
" 12, Silver pheasant, top-knot fowls,	5 "
" 13, Bolton greys,	3 "
" 14, Brown Dorkings,	4 "
" 15, White, "	4 "
" 16, Yankee game,	5 "
" 17, Java, "	5 to 10 "
" 18, Sicilian fowls,	3 "
" 19, Jersey Blues,	3 "
" 20, Plymouth Rocks,	4 "
" 21, Fawn-colored Dorkings,	4 "
" 22, Chittaprats,	3 "
" 23, Royal Cochins-China,	6 "
" 24, Manilla Bantams,	3 "
" 25, Sebright, "	3 "
" 26, Cuba, "	3 "
" 27, White ducks,	2 "
" 28, Spanish, do.	5 "

This list only embraces a part of the varieties of one exhibitor. The yards and hen house, (which is an old conservatory,) of these gentlemen, covers about three acres of ground, upon which they keep an average stock of 1,000 head, and some thirty different kinds. During the breeding season, each variety is kept in separate apartments; the cocks being introduced to hens for the purpose of "judicious crossing," with as much care as would be shown to a Durham bull, or an English race horse. The feed is principally corn, costing 75 cts. a bushel, and is kept constantly before them in feeding hoppers, which are filled once a fortnight. Oats, barley, potatoes, dough, and meat are fed occasionally;

water every day. Cost of food consumed will average about two cents a week per head; and it requires the labor of one hand most of the time to look after the establishment. During the moulting season, all except the game cocks, are turned out to grass together. By keeping the house warm through the winter, with plenty of food, they get a supply eggs, which then sell for high prices in the city. In the spring, they bring much higher rates for the purpose of raising stock; not however to be eaten, as will readily be seen by the enormous sums they sell for, to others affected with the same fever. For be it distinctly understood, the above are not "fancy prices," nor such as an individual would generally have to pay for a single pair; nor such as have been *realised* during the day. I saw one cock *change hands* at thirty dollars, and a hen of the same Shang-high sort, at fifteen—the owner refusing twenty-five dollars for a pair, and I was credibly informed of another *transaction* at fifty dollars for a cock and hen; which I understand is not an unusual price among the *fancy*.

The owner of one of this giraffe breed, seeing an old farmer eyeing a remarkably tall specimen that was stretching his neck away up into the upper regions of a three-story coop, inquired of him if he would like to make a purchase; observing how much it would improve his old stock of poultry.

"Wal, I guess not; I live in a *one-story* house."

Why? What has that to do with the matter?

"Wal you see, I keep my seed corn up garret, and I don't want to lose it."

No. Well you don't want to keep your fowls up garret do you?

"Oh! Bless your soul no!"

What then? I don't see your objection."

"Don't see! No Sir, can't that tarna great long-legged rooster stand on the ground and eat corn out of the garret window? You don't catch me with such a *beast* on my farm. *Improve my poultry*. Ha? Why, I would'nt cross that critter upon anything except a she jackass; and a darnation mean one at that. Faith! The hens look as though they were of that breed—I'm sure the owners are—they're all stern;" and with that sage observation he walked off with the air of a man whose dignity had been highly offended, with the idea that a gentleman of his appearance of good sense, should be offered a Shanghae cock to *improve* his stock of poultry; which, as I afterwards learned of him, consisted of some choice Jersey blues, a few brown Dorkings, and a good stock of yellow-legged Dominiques; also a few Bantams, to please the chil-

dreil. "Which, says he, "I would not give for the whole tentful of long-legged monstrosities, like these ugly brutes. What if they do weigh 12 or 15 lbs. a piece? They cost more than turkeys of the same weight, and are not half so good. Look into the Boston markets, Sir! Do you see any good poultry? If you do, you will find such prices, that none but the wealthy can afford to buy; for of all this great show, not a single owner is engaged in the business of raising poultry to supply the market. And the reason is very plain—it wont pay. Poultry can only be raised in a small way, as I raise it upon my farm, where the cost is not felt. When kept up and fed, every hen costs a dollar a year; and the eggs will just about pay for the trouble of taking care of them and not much more. So you see, just as soon as these humbug speculating prices go down, down goes the hen business about Boston, in spite of all this crowing and cackling of a parcel of old cocks and young biddies."

I was gratified to find that the long rough-looking homespun check woolen frock, which had perhaps deceived the rooster man into the idea that the owner was a flat, was not a cloak to hide a multitude of faults, but that it covered a form possessed of sound judgment and good sense; such as are often met with in similar working garbs in New England.

I find I cannot get through this great show in one letter, so good night. SOLON ROBINSON.

Boston, November 13th, 1850.

REVIEW OF THE NOVEMBER AND DECEMBER NUMBERS OF THE AGRICULTURIST.

OWING to a pressure of occupations, such as every farmer feels at this busy season, gathering in the late crops and preparing for winter, I neglected to furnish you a review of the November number; and so I have taken both months in connection, (the latter of which came to hand by this day's mail), and as I am in a terrible hurry, only glance at some of the articles which strike me as most worthy of comment, beginning with November; the first article of which treats of

Espaliers.—Truth every word of it, as I know by my own experience. The sooner gentlemen give them up for standard trees, the better it will be for their pockets and taste. Fruit grown upon espaliers, is like the Indian gun—"cost more than he comes to."

Cemetery of the Evergreens—Greenwood Cemetery.—I have put both of these articles under one head, though you have placed them wide apart in your pages. Some may think they are not

appropriate to a farmer's journal, but with all such hypercritics, I beg leave to differ; as they afford fine study for landscape gardening, if nothing else. But I hold that such model burial places will exert a great and highly beneficial influence over our rural population. The tendency will be to refine and elevate their taste and feelings. I always felt holier and happier, after a visit to Greenwood, than I did before, and I believe every farmer in the land would; and what is more, return to his home, determined henceforth to pay more attention and respect to the resting place of the dead of his own neighborhood.

Jefferson-County Dairy Farming.—And so Mr. Eames' cows nearly pay for themselves in milk, butter, and cheese, every year, do they friend Robinson? Well, the public ought to thank you for reporting it, if this is a *fact*. I am not inclined to dispute it; for I know a few cows here in my own happy valley, which do the same. It goes to show that a good cow is far more profitable than a poor one. I advise my brother farmers to pay more attention to quality hereafter, than they have been in the habit of doing.

Farm of Mr. Buckalew.—This is certainly a most surprising statement, and a few years ago, it would not have been believed that such results could have been brought about on such poor land. I can well recollect travelling over this part of the state before the days of railroads, and then I would not have thanked you for a fee simple of a thousand acres of such land; and the more a person had of it the poorer I should have considered him. But, see now, what intelligent enterprise can do. I shall be tempted next year to *happen in* on Mr. B., during peach time. I suppose out of his fifty-thousand-bushel crop, he would not mind my eating up a basket or two [Not in the least. He would give you a hearty welcome. We never made a visit where we felt more so. No doubt he would be delighted to see you. Captain, give us a call and we will go over with you next peach time. And you may as well bring one or two of the girls with you, by way of making the jaunt more agreeable.—Eds.]

Garden and Fire Engines.—Every farmer should have one of these valuable machines. With the one I got at your agricultural warehouse, the last time I was in New York, two men can throw water clear over my old gambrel-roofed house. They would be very useful in putting out a fire just commenced, as well as to water lawns and gardens, and wash the windows, for which purposes we use ours.

Village Lectures.—Go on; give us plenty of such excellent reading. Your selections from European journals are always valuable. How is it that these agricultural papers rank so much higher than our own—more elevated in tone and character of composition—full of science and instruction? By the bye, you need not be afraid to give us a little *scientific agriculture* now and then, for the boys are beginning to learn this at school. As for their fathers, they never will learn, for they never read; so you will lose no subscribers by the operation, but in my opinion gain many [We had anticipated Reviewer, and determined upon this course before his article came to hand.—Eds.]

The Hog.—Verily the Doctor has given us a blast indeed! I suppose what he says is true enough, for he has scripture for most of it. He has made one convert, and that is myself, for I have now sent all my pigs to the butcher, and there is an end of one torment. I never fancied the unclean beast at best, and now I trust I have done with him forever. I find there is no economy in keeping pigs, in our section of Old Connecticut; for my cows and calves eat greedily all my house slops, sour milk, and vegetables we formerly gave the pigs; and the dog and chickens pick all the bones. The horrid diseases or rather disease the Doctor speaks of, is true enough. It has often originated among the lower classes of the southwest, whose principle food the year round is hog and hommony. My advice is, avoid pork and fat meat, gravy and lard, as much as possible; more particularly in the hot months of summer. From the pigs, I will make a long stretch to windward and heave to among the birds in the

DECEMBER NUMBER.

What are Birds Good for?—Turn back to this article—read and reflect? and ye shall learn why these good gifts of God were given. “One never tires of listening to such sound doctrines.” That is true. I would make it a part of the education of every boy to whom it is desirable to give an agricultural education, that he should be taught what birds are good for.

Shorthorn Cattle.—Here is a correspondent bearing down upon country gentlemen, with all sails set; yet I do not see from his own showing, that he is a single rope yarn better than they are, in the way of improvement nor liberality. Take care my friend that the recoil of your gun don't knock you over. First remove the beam out of thine own eye. However, I do think that country gentlemen, and for that matter, *country farmers*, too, one of these days, will

be quite as much ashamed of having a poor breed of cows or sheep on their premises, as a poor horse, poor carriage, or poor house. In my poor opinion, all hands need piping up from fore-castle to cabin; and what is more, I hope they will get it. So bear ahand here with your editorial hardspike, and rope's end!

How to Mismanage a Garden.—Upon my word, I always thought the public knew enough about *mismanagement*, without any instruction. But “Live and learn,” is a good old proverb.

Village Lectures.—These two, one in November, containing a series of propositions, and one in December, giving answers, afford much valuable information, although somewhat carelessly written. I hope you will give us a few more of the same sort, so that everybody and his wife, and certainly everybody's children will read and profit by it.

The proposition that the substance of wheat, butter, cheese, and woody fibre comes from the atmosphere, I shall not controvert; but I should like to see this writer growing wheat upon land destitute of the phosphates; or making cheese upon soil deficient in *casein*, like that of some districts of England, which failed producing grass a few years ago, until the exhausted principle was restored by ample dressings of bone meal.

Maryland Farming.—Cows *may* be milked up to the day of calving, but is it policy? It is the opinion of breeders in this country and England, that they should go dry one month before calving, at least; else the foetus suffers, and the qualities of the stock deteriorate in the first or second generation.

The Philosophy of Human Life.—The advice of Mr. Tomlinson, though good, is not suited to all latitudes nor all constitutions; because there is a higher governing power. *Half meals* may do for some. I have always found my own health promoted by whole meals; and if the food is mostly vegetable, or plain cooked, not overdone meats, particularly beef and mutton, belching and indigestion never ensue. I eat as much of such food as the appetite naturally craves; without which I feel uncomfortable, uneasy, and unfitted to perform my laborious duties. Without such diet, I could not withstand the rigors and variations of some sixty degrees of latitude, and still maintain my robust health. I am as much opposed to stuffing as Mr. Tomlinson; I am equally opposed to starving, man or beast.

Ohio Cattle Show.—Very good, Mr. Visitor; I hope the sketches you promise will be still more interesting. Ohio is a great state—some Down-Easters know what made it so—and her spirited stock breeders and improving farmers

have made a good beginning with this first state show of theirs; excelling that of New York, nine years ago. A few states are well under way upon the voyage of improvement, and others quietly enjoying the sleep of the sluggard, which still rests upon them with all the force it ever has upon that ancient race. Shall we wait the termination of the nap, or shall we try to rouse them with the news of a new election—the only sound that will wake them? Suppose we nominate for governor, the Honorable Mr. Improvement, of Shorthorn Hall; the elegant Mr. Devonshire, of Oxdale Plantation, will make a wide-awake secretary; and Old Squire Cotswold, of Fat-mutton Hollow, a real substantial treasurer. Old Rip will wake at last!

Tool Shop for Farmers.—"Every farmer ought to possess a variety of tools, such as are needed in repairing farming implements." Very true, and every farmer ought to possess the implements; but not one half of them do; and not one in ten possess the tool shop recommended. If they ever should, they will desire also to possess the

Wood-sawing Machine for Cutting Fuel, which you have represented, and ought to have given the price, and whether it could be purchased at your warehouse.

Pruning and Budding Knives.—These are not altogether for use of boys—unfortunately, I have none—for daughter Mary, now leaning upon father's shoulder says she will try her hand next season, at budding and grafting, if I will get a set. So you may put them in the horticultural toolchest I ordered last week.

Cattle Shows and Fairs.—How much these are on the increase! The idea of trying to have them held one after another and interchanging visits is a good one.

Education of Farmers.—A short paragraph, full of inconsistencies. Farmers do not "often complain of want of education in themselves"—they think they know enough, and that is the reason why they do not employ their leisure time in mental improvement.

Chemistry for Girls.—Why not for men and boys and women, too? It is a kind of information, that would not be greatly to their disadvantage. The article in question has given no little information to your

REVIEWER.

MOULDY BEANS may be restored and made fit for use, if not very bad, by rinsing well in hot water and carefully drying. Mouldy corn or peas may be treated in the same way.

A DAY IN WESTCHESTER COUNTY.

THROUGH the politeness of the treasurer of the Harlem Railroad, I was enabled, or rather induced to make a little excursion upon this great city artery—a proper term, for it keeps up the circulation between town and country—and take a few notes for the benefit of my readers. The cars start from the City Hall, several times a-day and are taken by horses through the thickly-settled streets, occupying about half an hour; then by steam at a very moderate rate, owing to the numerous stoppages at a great number of growing villages along the line of this road. I noticed the singular fact, that these country residences are mainly supplied with marketing from the city, instead of their own vicinity.

This road is well conducted, and of immense advantage to the country through which it is located. The freight upon milk, alone, this year, will exceed \$40,000. It was over \$5,000 in the month of July—some days \$200—Think of that, unimproving generation!

What would have thought the old settlers of '76—if they had been solemnly assured that the time would come to their children, when the matutinal milkmaid should send her rich product, warm from the cow, to the city, fifty miles distant, to be used for breakfast the same morning; while the messenger who carried it thither, should return again for dinner. What would have said Rip Van Winkle, if his sleep had been prolonged till the whistle of the locomotive had waked him to new life? He would not have been much more astonished, than some of the ancient and unbelieving denizens of the old shingle houses among the hills of Westchester. But the miracle has been accomplished, and the whole course of cultivation changed, for the tillable land has increased in value—and now every article of produce—everything valuable can be sent and daily sold in the city, and the owner lie down at night again in his own house, with the money under his pillow.

The great part of this county is composed of stony hills, more fit for pasturage than any other porpose. Milk is the most profitable article that can be produced. The dairyman gets two cents a quart, delivered in tin cans at any of the frequent railroad stations. Cows yield an annual average income of about \$30 per head. Cattle are driven from the west, every year and fatted here; and sheep would be, if it were not from the fact that farmers have been compelled to abandon keeping them, on account of the terrible destruction among them by dogs.

It was proposed in the agricultural society of this county to petition the legislature, for a law to levy a general tax upon dogs to pay for the sheep destroyed. Goveneur Morris moved to amend the motion, reverse the order, and tax the sheep to support the dogs; as it was evident that a majority of the people of this county were more in love with dog meat than with mutton. He had tried to keep sheep enough to furnish his own table, but found that he could not do it unless he took them into his own bed room every night. And even that would not save them; for they are frequently attacked in open day, in some secluded pasture. It is a pity that every one who keeps a sheep-killing cur, is not obliged to eat him. Young calves, too, are often destroyed by these intolerable pests of the Westchester farmer.

Much of the land in this county is suitable for fruit culture, and would be extensively planted in orchards of choice fruit for the city market, except for the reason given at length in another article. But now, who will plant an orchard when he knows the fruit will be all stolen? Or who will buy a flock of sheep to graze his rocky hills, although good for little else than sheep walks, when he knows one half of them, at least, will go to the dogs, instead of the butcher.

I enjoyed a long ride with an enterprising young farmer, through the winding crooked roads, and over the granite hills, and saw much more to interest my mind than I can now relate. Everything has an ancient, and I must say rather behind-the-age appearance. Old-fashioned gambrel-roofed farm houses; old barns and out-buildings, covered with an old mossy coat; old mossy wells, with old iron-bound buckets; old willow trees overhanging the old spring house, from whence the same little rill has trickled down among the old grey granite rocks, through long centuries of old time. Old stone walls meet the eye at every turn, to mark where once was perhaps a fence; where now is an unsightly line of stones, greatly in the way of cultivation, which would serve a far better purpose if buried beneath the surface to act as under-drains, than they do in their present position. Much of the land is of a character that would be benefited by such a disposition of the surface stones, which, in many cases, have been laid into walls, *just to get them out of the way*. Do farmers ever think how much walls are in the way; or how much land they now occupy? I noticed upon one farm, five contiguous lots, not one of which contained an acre, surrounded by heavy stone walls; and the remainder of

the farm was divided into inclosures of four or five acres each. Probably one tenth of the land was thus lost to cultivation, besides the loss of time in annual repairs, and keeping them clear of bushes. Close as this county is to the city, the majority of the inhabitants have not yet caught the infecting spirit of improvement, which is now animating the age, and fulfilling that prophecy which says, the crooked shall be made straight, and rough places smooth. But the time is speedily coming when old prejudices must give way.

This is a reading age. The young farmers of Westchester are beginning to take cheap facilities of obtaining practical and scientific agricultural information. Many of them will obtain and read this journal the present year. I hope we may have many a pleasant evening together. SOLOM ROBINSON.

New York, November, 1850.

GOOSE AND DUCK PASTURE.

I RESIDE in a neighborhood where the land is poor and rocky, but abounds in marshes and ponds. The soil is either too thin, or too stony, or too wet to cultivate to any advantage; and yet, I cannot afford to let it lie idle. I have tried cattle feeding on it without any advantage; sheep have done better, still not quite well enough; I am therefore, of opinion, it would be more advantageous to turn it to a large goose and duck pasture. What is your opinion on the subject? Will it pay?

I have no doubt, that after the goslings get the pin feathers on their wings, they could find a good living on the pasture, and in the ponds; and as for the ducks, there is any quantity of grubs, tadpoles, grass roots, and other matter, for them to feed upon all summer. I am sure *they* would do well, but am not so confident about the geese, or more properly the goslings. Please to advise me. INQUIRER.

We are of opinion that our correspondent would do well to stock his rough lands with geese and sheep. Large quantities of poor heathy land is thus devoted to them in England, and other parts of Europe. A sheep will get a living where a bullock would starve; and a goose would find sufficient pasture where a sheep could not exist. There are thousands of acres of just such land within sixty miles of this city, as our correspondent speaks of, all of which might be profitably devoted to goose pasture, and thus cheaply supply our markets with fat, luscious roasters.

THE EUROPEAN QUAIL.

WHEN wild, the quail is found throughout the eastern continent. It is a bird of passage, arriving in Europe in May, and taking its departure at the end of September. It feeds on wheat and other corn, rape seed, millet, hemp seed, and the like. It also eats green vegetables, as well as insects, and particularly ants' eggs.

In the house, it is fed on the same food, adding bread, barley meal, mixed with milk, and occasionally salad or cabbage, chopped up small, and, that it may want nothing to keep it in health, plenty of river sand for it to roll in and peck up grains, which assist its digestion; but this sand must be damp; for if dry, it will not touch it. It drinks a great deal, and the water, contrary to the opinion of some persons, should be clear, and never turbid. It moults twice in the year, once in autumn, and again in spring; it then requires river sand, and greater attention than at other times.



THE QUAIL.—FIG. 6.

The quail breeds very late, never before July. Its nest, if it can be called so, is a hole scratched in the earth, in which it lays from ten to fourteen bluish-white eggs, with large brown spots. These are hatched after three weeks' incubation. The young ones, all hairy, follow the mother the moment they leave the shell. Their feathers grow quickly; for in the autumn, they are able to depart with her to the southern countries. The males are so ardent, that if one is placed in a room with a female, he will pursue her immediately with extraordinary eagerness, tearing off her feathers if she resists in the least; he is less violent if he has been in the same room with her during the year. The female, in this case, lays a great many eggs, but

rarely sits on them; yet, if young ones are brought her from the fields, she eagerly receives them under her wings, and becomes a very affectionate mother to them. The young must be fed on eggs, boiled hard and cut small, but the best way is to take the mother with the covey, which may be done with a net. She watches over them attentively, and they are more easily reared. During the first year, one would think that all in the covey were females, the males resemble them so much, particularly before the brown shows itself on the throat.

The adult female, however, differs very sensibly from the male; her throat is white, and her breast paler, and spotted with black, like that of the throat. In the house, if allowed to range, its gentleness, neatness, and peculiar motions are seen to advantage; but it is often kept in a cage of the following make:—

A small box, two feet long, one foot deep, and four high, of any shape which is preferred; in this, are left two or three openings, one for drinking at, the other to give light; besides this, all is dark; the bottom is a drawer, which should be covered with sand, and have a seed drawer at one end; the top is of green cloth; for as the quail often springs up, it would hurt itself were it of wood. The case should be suspended during the summer, outside the window; for the quail sings much more when confined in this manner than if allowed to range the room, where there are many things to call off its attention from its song. This bird never sings when left to run about in a light room, except in the night, but continually when in a darkened cage.—*Browne's American Bird Fancier.*

This, it will be seen, is an entirely different bird from the one known in New England as the quail, which is the same bird known as the partridge, in Kentucky and other states. The name is a very vague one, for it is applied in different countries, to more than twenty different species. The one described in the preceding article, is unknown in America, unless some specimens turned loose by Audubon, near Charleston, South Carolina, some twenty years ago, have propagated their species in the forests of that state.

In Europe, this species is the most common of wild poultry kept in the house. If not susceptible of becoming naturalised in this country, this bird is worthy of the same object with us.

SMALL FARMS.

THERE are thousands of farms in the New-England states, varying in size from twenty-five to one hundred acres, upon which thousands of families not only live, but are well-to-do in the world, and have reared large families in comfort and prosperity. It is true, the children, for want of room to work, have to go to *contriving*, and it is this necessity that has filled the whole country with Yankee contrivances of all kinds, from a basswood pumpkin seed to a steam engine.

One of the greatest crops of the diminutive farms, is, that inventive genius which characterises the whole nation. No Yankee clock ever run with more regularity than the whole of the operations connected with some of the small farmers. Look at their cattle, horses, hogs, sheep, geese, ducks, and chickens. There is an appearance of unmistakable thrift about everything animate and inanimate, upon some of these places. It is true, many of the occupants work with the same old-fashioned tools their fathers did, and follow all the same time-honored practices; but the next generation will be more alive to the spirit of improvement.

STEALING FRUIT.

IN a late conversation with an intelligent farmer of Westchester county, we recommended the raising of fruit, upon the rocky hill sides of the region north of this city, as the most profitable mode of cultivation that could be adopted; the New-York market being so easily approached by two rivers and three railroads, that intersect this county. His reply astonished us in no small degree. He said: "unless a great change is soon effected, farmers will be obliged to abandon the orchards now growing, and put the land into grass; because of the extensive system of robbery, that is carried on by hordes of idle vagrants, everywhere within reach of New York, who not only plunder nuts, berries, and fruits, growing wild, but actually enter the orchards in gangs, in open day, strip the trees, and carry off the fruit by baskets and bags; and if interfered with, they are boldly insulting, and sometimes show fight, rather than give up their booty. Even corn, potato and turnip fields are invaded, and the produce carried off by the wagon load. This kind of stealing is generally done in the night; but Sunday is the great day for robbing orchards; not only depriving the owner of his fruit, but destroying all the enjoyments of a quiet Sabbath day's rest or worship.

It is due to American character to say, that a

large share of these intolerable thieves are foreigners, mostly Germans of the very lowest grade, perfectly lawless, and utterly heedless of the right ownership of anything they can lay their hands upon; acting upon the principle that this is a *free* country, and actually arguing that every one has a *right* to a free distribution of all the fruits of the earth. If the nuisance continues to increase for the next five years in proportion to the last, all fruit cultivation will of necessity be abandoned in the vicinity of the city; and it will become a question with farmers whether railroads are not a greater curse than blessing; as they afford facilities to such vast numbers of petty thieves from the city, to penetrate the country and carry off all the marketable produce that would otherwise be sent forward by these lines of easy communication; thereby making the land more valuable, inducing better cultivation, and greatly enhancing the happiness of our rural population.

COLD, OR CATARRH IN SHEEP.

FLOCK masters should take particular care of their sheep when affected with a cold during the winter months; for if neglected, it frequently becomes so deeply seated as to be incurable, and ends in phthisis, or consumption. The best remedy for a cold is, first, place your sheep in a well-ventilated, dry stable, comfortably littered; and second, give it any slightly purging medicine, with a moderate allowance of hay, and a bran mash, one fifth of which should be oil meal. Colds, or catarrhs, are not only epidemic but endemic; be careful, therefore, where you winter your sheep, that there be no predisposing cause in their locality; and when they are attacked, remove them instantly from the flock. By following these precautions, and keeping them well fed, sheltered, aired, watered, and salted, one may bid defiance to disease among his flocks.

CONNECTICUT TOBACCO.—The growing and manufacturing of this crop, in the Connecticut-River Valley, has become a great business. At Suffield, there are some thirty cigar factories, at which 150 persons, at least, are employed. These hands will average 2,000 cigars a week, making 15,600,000 a-year, in one town. Most of them are made of domestic tobacco. Some of the best, with Cuba wrappers, are sold for real Spanish imported. Many a New-York dandy, while puffing his *three-for-a-shilling*, *real regalias*, is unwittingly contributing to the agricultural interests of old Connecticut.

Ladies' Department.



THE accompanying is a sketch of a pot I have had made for layering in, &c. There are two openings opposite each other, with a notch on one side of each to hold the branch, on the right of one opening, and the left of the other. These pots may be raised on stakes, and fixed with wires to enable the amateur to propagate any favorite standard rose, and cultivate it on its own roots, which insures against loss of the particular kind; few roses on their own foundations being destroyed by our winters, although budded varieties frequently perish. I have not seen any similar pots, and believe the idea to be new, but it may not be so.—*Gardners' Chronicle.*

FANCY BISCUITS.—Reduce one pound of blanched almonds to powder, and moisten with orange-flower water until you have a smooth paste; add a little fine flour and mix well, and then place in a pan over a slow fire; stir the mass constantly to prevent burning, until it becomes hard enough not to stick to the fingers; then mould it into various sorts of fancy shapes. Now make an icing of various colors and dip your forms to suit color and taste, and set them upon a clean sieve to dry. You may make them still more fanciful, by strewing over them different-colored pistachio nuts. To be served with nuts and cakes, at evening parties, or any other extraordinary occasion.

COLORING GREEN TEA.—Large portions of the tea imported under the name of *green*, are made so by throwing into the pans at the last heating of the leaves, a mixture of finely powdered *indigo* and *gypsum*, in proportion of three of the former to four of the latter. For every 100 lbs of green tea used, the consumer will swallow from 8 to 12 oz. of the latter. But the same persons who will exclaim against the *celestials* for munching rats, cats, and bow-wows, will swallow indigo and gypsum, or what is much worse, prussic acid or verdigris, both deadly poisons, and which are furnished us outside barbarians, simply because our market demands it, as it did annattoed cheese a few years since.

ALUM WHEY, made by boiling a quarter of an ounce of alum in a pint of milk, and strained, is a good medicine for bowel complaints of children. Give a wine-glass full three or four times a-day.

PRESERVING WILD FOWL.—Remove the intestines carefully, and wipe out all the blood with an old soft towel, until the flesh is quite dry; then dust flour over the inside, and scatter two or three drops of creosote upon a piece of blotting paper, and put that in and tie the bird up tight in another piece of similar paper, upon which put a few drops more creosote; then hang up each carcass, separate, in a cool, dry place, and it will keep sweet for a long time. Never remove the feathers from a bird you wish to preserve.

ALMOND FLAVOR FOR PASTRY, &c.—Dissolve one ounce of oil of almonds in one pint of spirits of wine, and use one drop to a pound of dough. It is powerful and poisonous, but not injurious in small quantities, and imparts a pleasant flavor.

Almond paste is often adulterated. Every lady can make her own by beating the almonds into a smooth paste, in a mortar and then adding white of eggs and rose water, with half as much spirits of wine, to give the mass a proper consistency. It is a harmless cosmetic when made in this way, and very useful to prevent chapped hands.

TO MAKE BLANC.—Grate 1 lb. old dry bacon, and add 1 lb. beef suet, $\frac{1}{2}$ lb. of butter, two lemons, two carrots cut into dice-sized cubes, three or four chopped onions, and just water enough to make a stew; boil about an hour. Some prefer to add a little boiled rice on dishing up, if there is much water remaining unabsorbed.

A VALUABLE CEMENT FOR HOUSEHOLD USE.—Take new milk, half a pint, and curdle with sharp vinegar; separate the whey and mix with the curd, the whites of five eggs, beat well; add fine quicklime, and mix till you have a ductile paste or putty. It will stop cracks, and is fire and water proof.

EGG BISCUITS.—Beat separately the whites and yolks of twelve eggs; mix, and add $1\frac{1}{2}$ lbs. of powdered white sugar; whisk all into bubbles; add 1 lb. of flour and the grated rinds of two lemons. Fill buttered tin molds; grate sugar on top; bake one hour in a quick oven.

TO REMOVE GREASE SPOTS FROM FURNITURE, WOOD, OR MARBLE.—Make a paste with Fuller's earth, soft soap, and pearlash, and spread over the spot, and let it dry for twenty-four hours, and then wash off the paste.

Foreign Agricultural News.

WE are in receipt of our foreign journals to the 16th of November.

MARKETS.—*Ashes*, dull. *Cotton* has rallied, and is $\frac{1}{4}$ d. per pound, higher. *Flour*, firm. *Beef and Pork*, inactive. *Lard*, an advance of 1s. per cwt. *Wool*, firm, with a light stock on hand.

Soiling.—At the East Berwickshire Farmer's Club, it was unanimously resolved, after a full discussion, that soiling is preferable to grazing in the fields.

Trimming Box Borders.—This is now done with a sharp scythe. First, cut the top quite level, with the scythe or shears; then draw a line through the centre to serve as a guide—the trimmer stands upright, and by short quick jerks, cuts off all the lateral branches at a given number of inches from the line. A smart hand will trim a mile a-day.

Sale of Shorthorns.—At Mr. Colvin's sale of shorthorns, at Monkham's Hall, near Waltham Abbey, Essex, on Thursday last, sixty-seven head, comprising bulls, cows, and calves, fetched the large sum of £2,033 17s. averaging £30 7s. (\$150) each. Mr. Henry Stafford, the editor of the *Herd Book*, was the auctioneer.

Removal of Subdivision Fences.—This subject is now warmly discussed in the English Agricultural periodicals. One writer says: Where the smallness of the fields, in some parts of England, and the enormous mounds, with all their accompaniments of large timber, brushwood, and weeds, is considered, it is easy to see that a wholesale removal is necessary to profitable culture.

Coal and Wood Ashes.—A writer in the North-British Agriculturist, contends that coal ashes rank very low as a chemical meliorator of earth and soils. Wood ashes, according to Liebig, are of far more value. We agree with the author and the chemist in their estimate of the value of coal and wood ashes, and so will our friends beyond the Atlantic, where there is more wood to spare for making ashes than on this side of the water. Soot is more favorably reported of; an analysis of it is given, and a report of the results as a manure in raising potatoes appears favorable. Soot is one of those manures which acts rapidly on vegetables; but it seems of too volatile a nature to last long as a manure in the soil. From our own experience, we would say that, at the rate of 25 to 30 bushels of soot an acre, as good a return of potatoes might be obtained, where the soil was not in an exhausted state, as with from 15 to 20 tons of farmyard manure. Green broom tops, as we have formerly stated, we have found to be much superior to either, in raising potatoes.

Adulteration of Guano.—In the same paper, the editor says: In the article of guano there is much adulteration to be met with; it were well if some simple, but efficient method of detecting such adulteration were found out and published, so as to put it in the power of every farmer to ascertain the comparative value of the article. This, we think, might be accomplished by the

society's chemist, and made public through the agricultural press of the country. This might put an end to the nefarious trade of adulterating, and of making the farmer pay nearly double price for an article which he now feels to be necessary for carrying on his operations. Could not this be profitably made a question for discussion at some of the coming monthly meetings? Few questions can be of more importance at this time to the honest farmer. We shall most gladly receive and insert any hints that may be useful on this subject from our chemical readers or correspondents, and thus join in a warfare against the too prevalent modern custom of adulterating goods.

Agricultural Discussions.—At one of the monthly meetings of the Highland Society, Mr. Hope, said: If we expect to be made wiser by hearing the experience of others, we should also be willing to communicate our own opinions. I have great hopes that in the continuance of the same frank, easy, mutual exchange of opinions and practices, with comparisons of different modes of agricultural management, will not only be of great advantage to those who participate in these discussions, but also to the country at large. As a farmer, I shall positively be ashamed of my order, if we do not profit by the advantages we now possess in our numerous organisations and journals, to gather information as it were, into a focus, from all parts of the country.

We perfectly agree with the remarks of this very sensible Scotch farmer, which are equally applicable to this country as to that. By discussion and study, and enlightening the mind, our original ideas may be confirmed, or entirely swept away, and valuable improvements adopted. The Scotch farmers do not sit down, like thousands in this country, content that they know all about farming now, but they open their minds to inquiry and an earnest desire, if there is any better system than the one they are following, to find it out, adopt, and enjoy its benefits.

Quantity of Seed Wheat per Acre in Scotland.—One of the speakers at the same meeting said his practice was to sow two bushels at first; increasing to two and a half late in the season; altogether by drill machines, which he considered preferable to broadcast, because it allowed of spring hoeing the crop, a very great advantage.

Sale of Devon Cattle.—The sale of the celebrated Devon stock of Mr. Matthew Paul, of Compton Pauncefoot, attracted an immense concourse of gentlemen, farmers, and others, from all parts of the country, on Tuesday last. We understand that a portion of the stock was purchased for the Great Exhibition in 1851. The following were the prices obtained:—Four-year-old bull, £40; bull calf, £20 10s.; do £12 10s.; do, £12; and four do., £10 each. Dairy cows, in calf, £47, £40, £35, £24, £23, £20, and down to £11 10s.; the whole forty-four averaging about £17 10s each. Three-year-old heifers, in calf, £19, £15 £12, £11 each, and downwards. Three-year-old heifers, barren, £80 per pair; and £18 10s., £18, and £16, each. Yearling heifers, in calf, £24 per pair.

Editors' Table.

TO SUBSCRIBERS.—The last number of the ninth volume of the *Agriculturist* is before you. Have we fulfilled the promise that it should equal, if not exceed in value, any of those previously published? If so, then it is worthy of your patronage; for it contains more matter that is interesting to the farmer, planter, gardener, and mechanic—to say nothing of the thousand valuable household items of information—than can be had for the same amount of money in any other form, even in these days of cheap literature.

The tenth volume we intend to make still more valuable; and we have, therefore, no hesitation in urging you to continue to read, because we know you will derive information, useful to you in nearly all the industrial pursuits of life. Is it not your duty, in doing to others as you would be done by, to urge your friends to participate in its advantages and become subscribers also to this paper? Are we not fairly entitled to compensation for our labor? The price of a single subscription is nothing to you; but ten thousand are something to us, for it takes nearly that number to pay expenses. No agricultural paper in the United States expends money so freely as the *Agriculturist* has done to obtain valuable and interesting information, and furnish embellishments for every number of the paper.

Of the ability of the editors to make a paper valuable, we need only point to their previous works. Our correspondents from all parts of the country are equal at least, to those of any other journal of the same, character.

MR. SOLON ROBINSON, whose name is familiar to all our readers, has made several long and expensive journeys through the United States, to collect information exclusively for this work; and before this article reaches our subscribers, he will be on his way to Virginia, North and South Carolina, Georgia, and Florida, for the same purpose. To defray all these extraordinary expenses, we must have subscribers. If "the laborer is worthy of his hire," do not only what is due from yourselves, but persuade your neighbors and friends also, not to withhold from themselves, their children, and household, information of inestimable importance to them.

THE FAIR OF THE AMERICAN INSTITUTE.—Our intended notice of this annual exhibition of American industry is crowded out by other matter. The number of visitors was greater this year than upon any previous one. We have taken pains to ascertain correctly the amount of money received for tickets—\$21,388, which, upon the usual ratio of calculation for free admission, will give 320,000, for the number that must have visited the fair at Castle Garden during the three weeks it was open. The advantage exhibitors gain by the opportunity of extending a knowledge of their business among such a vast number of persons, and perhaps, getting orders for goods, is undoubtedly of considerable importance.

EXCURSION TICKETS TO THE WORLD'S EXHIBITION.—

The house of G. W. McHenry & Co., of Philadelphia will issue cabin-passage certificates for the Industrial Exhibition to take place in London next year. The tickets for the excursion to Liverpool and back are to be furnished at the low price of \$100, including everything but wines and liquors. The trips will commence with the packet ship *Mary Pleasants*, to sail on the 15th of March next.

THE AMERICAN AGRICULTURAL BOOK PUBLISHER.—C. M. Saxton, the publisher of this paper, 123 Fulton st., (up stairs,) is justly entitled to the honor of the above appellation; for he has already published more agricultural works than any other man in America. and will greatly increase the number during the present year. Among those lately published, is

JOHNSTON'S LECTURES on the general relations which science bears to Practical Agriculture. Price, handsomely bound in cloth, gilt, 75 cts.; in paper covers for mailing, 50 cts.

But the cheapest valuable agricultural work ever published in this country, is that entitled LECTURES ON THE APPLICATIONS OF CHEMISTRY AND GEOLOGY TO AGRICULTURE; by the same author, (Prof. Jas. F. W. Johnston, of England,) an octavo volume of 700 pages, for one dollar in paper covers, or one dollar and a quarter, bound. This work can be sent all over the United States in paper covers by mail, for about 20 cts., postage. Its cheapness and great value should induce every farmer in America to obtain a copy without delay.

VALUABLE WORK NOW IN PRESS.—Mr. Saxton is republishing the great work of Youatt & Martin on Cattle, with all the original engravings; and an addition of the most reliable veterinary information of England and France; together with a treatise on milk, butter, cheese, and the management of the dairy; and many other matters of interest to stock breeders. For the purpose of making the work more valuable, the publisher has employed Mr. Stevens, well known in this country as an importer of cattle and scientific breeder, to edit the work, and adapt it to the United States.

EAST-INDIA PUMPKINS, from the garden and nurseries of Jacob Hewes, near Leipersville, Pa. We forwarded the above as directed, except one we kept ourselves, for the purpose of testing its quality, and here is the Captain's acknowledgement.

Friend Allen:—Your note, with the present from friend Hewes, has been received. These pumpkins are old Calcutta acquaintances of mine, which I am glad to meet with in this country, having lost the seed, I brought from there, by the mice. I appreciate these, not alone for their good qualities, but because it is the first acknowledgment I have ever received from any of your readers that *they* appreciate the labors of

REVIEWER.

The Valley, Nov. 25th, 1850.

P. S. I shall forward the seed of the above in due time, with instructions to your seedsman to give one or two, only, to each person who calls for garden seeds in the spring. This will give them a wide circulation.

Review of the Market.

PRICES CURRENT IN NEW YORK, DECEMBER 3, 1850.

ASHES, Pot,.....	100 lbs.	\$6.06	@	\$6.12
Pearl,.....	" do.	5.75	"	5.81
BALE ROPE,.....	" lb.	9	"	11
BARK, Quercitron,.....	" ton.	36.00	"	40.00
BEANS, White,.....	" bushel.	75	"	1.50
BEESSWAX, American, Yellow,	" lb.	20	"	26
BOLT ROPE,.....	" " "	10	"	11
BONES, Ground,.....	" bushel.	45	"	55
BRISTLES, American,.....	" lb.	25	"	65
BUTTER, Table,.....	" "	15	"	25
Shipping,.....	" "	9	"	15
CANDLES, Mould, Tallow,.....	" "	10	"	13
Sperm,.....	" "	25	"	50
Searine,.....	" "	25	"	30
CHEESE,.....	" "	5	"	10
COAL, Anthracite,.....	2,000 lbs.	6.50	"	7.00
CORDAGE, American,.....	" lb.	11	"	13
COTTON,.....	" "	12	"	16
COTTON BAGGING, Am. hemp,	" yard.	15	"	16
FEATHERS,.....	" lb.	27	"	35
FLAX, American,.....	" "	8	"	9
FLOUR, Sour,.....	" bbl.	3.62	"	4.12
Ordinary,.....	" "	4.18	"	5.00
Fancy,.....	" "	5.25	"	6.75
Buckwheat,.....	" "	—	"	—
Rye,.....	" "	3.25	"	3.62
GRAIN—Wheat, Western,.....	" bushel.	1.00	"	1.25
" Red and Mixed,.....	" "	9	"	1.05
Rye,.....	" "	75	"	80
Corn, Northern,.....	" "	69	"	71
" Southern,.....	" "	68	"	70
Barley,.....	" "	95	"	103
Oats,.....	" "	40	"	50
GUANO, Peruvian,.....	2,000 lbs.	—	"	60.00
Patagonian,.....	" do.	—	"	40.00
HAY, in Bales,.....	" 100 lbs.	45	"	60
HEMP, Russia, Clean,.....	" ton.	210.00	"	230.00
American, Water-rotted,.....	" "	160.00	"	200.00
" Dew-rotted,.....	" "	140.00	"	175.00
HIDES, Southern, Dry,.....	" "	10	"	11
HOPS,.....	" lb.	10	"	30
HORNS,.....	" 100.	2.00	"	10.00
LEAD, Pig,.....	" 100 lbs.	4.62	"	4.75
Pipes for Pumps, &c.,.....	" lb.	5	"	7
LARD,.....	" "	7	"	8
MEAL, Corn,.....	" bbl.	3.00	"	3.37
MOLASSES, New-Orleans,.....	" gallon.	30	"	35
MUSTARD, American,.....	" lb.	7	"	10
NAVAL STORES—Turpentine,.....	" bbl.	1.75	"	2.00
Pitch,.....	" "	1.25	"	1.75
Rosin,.....	" "	1.35	"	1.40
Turpentine,.....	" "	2.44	"	2.87
Spirits of Turpentine,.....	" gallon.	33	"	37
OIL, Lined, American,.....	" "	79	"	82
Castor,.....	" "	1.37	"	1.50
Lard,.....	" "	65	"	75
OIL CAKE,.....	" 100 lbs.	1.25	"	1.50
PEAS, Field,.....	" bushel.	75	"	1.50
Black-eyed,.....	" 2	1.75	"	2.20
PLASTER OF PARIS,.....	" ton.	2.00	"	2.75
Ground, in Barrels of 300 lbs.	" "	1.12	"	1.25
PROVISIONS—Beef, Mess.,.....	" bbl.	7.00	"	10.00
" Prime,.....	" "	3.75	"	5.00
" Smoked,.....	" lb.	6	"	12
" Rounds, in Pickle.....	" "	4	"	6
Pork, Mess.,.....	" bbl.	10.00	"	12.00
" Prime,.....	" "	6.50	"	9.00
Bacon Sides, Smoked,.....	" "	3	"	4½
" in Pickle,.....	" "	3	"	4
Hams, Smoked,.....	" "	5	"	9
" Pickled,.....	" "	4	"	7
Shoulders, Smoked,.....	" "	4	"	6
" Pickled,.....	" "	3	"	5
RICE,.....	" 100 lbs.	3.00	"	3.50
SALT,.....	" sack.	1.00	"	1.60
" Common,.....	" bushel.	20	"	35
SEEDS—Clover,.....	" lb.	6½	"	9
Timothy,.....	" bushel.	2.00	"	3.50
Flax, Rough,.....	" "	1.60	"	1.65
SODA, Ash, (80 per cent. soda),.....	" lb.	3	"	—
Sulphate Soda, Ground,.....	" "	1	"	—
SUGAR, New-Orleans,.....	" "	5	"	8
SUMACH, American,.....	" ton.	35.00	"	37.00
TALLOW,.....	" lb.	7	"	8
TOBACCO,.....	" "	4	"	15
Eastern, Seed-leaf,.....	" "	15	"	20
Florida Wrappers,.....	" "	15	"	60
WHISKEY, American,.....	" gallon.	27	"	28
WOOLS, Saxony,.....	" lb.	40	"	60
Merino,.....	" "	35	"	40
Grade Merino,.....	" "	30	"	35
Common,.....	" "	20	"	30

NEW-YORK CATTLE MARKET.

At Market 2,200 beef cattle, (800 southern, the rest from this State and the East,) 130 cows and calves, and 8,000 Sheep and Lambs.

Beeves.—The supply of beeves last week was more than enough to meet the demands of purchasers; about 370 head at both markets remained over, unsold. Prices of good retailing qualities ranged from \$3.50 to \$7.75. Market closed dull.

Cows and Calves.—All sold at prices ranging as to quality, from \$22.50 to \$46.

Sheep and Lambs.—Sales of sheep at from \$2.75 to \$4.50. Lambs, \$1.50 to \$3.50. Left over, 600. nov. 26

REMARKS.—Wheat and corn have slightly advanced, and are very firm. Nothing else worthy of note since our last.

The Weather continues mild for the season, and has been favorable for the sugar harvest. Upon the whole, the past year has been a highly prosperous one for the farmers of our country, for which they should be duly grateful to a kindly superintending Providence.

TO CORRESPONDENTS.—Communications have been received from James G. Kinnaird, A Subscriber, Samuel D. Martin, L. F. A., and Reviewer.

Subsoiling Light, Sandy Land—A Long-Island Subscriber.—We can see no advantage in subsoiling your land.

In consequence of the coming holidays monopolising everything else in New York this month, we are obliged to make up the January number so early in advance, as to preclude several articles designed for it. They shall appear in February.

☞ All communications designed for a certain number of this periodical, to insure their insertion in such number, must be received by us one month in advance.

ACKNOWLEDGEMENTS.—List of Premiums of the First Great Fair of the Kentucky Agricultural and Mechanical Society: The Agriculturist's Guide and Almanac for 1851, from James G. Reed.

FARMERS' AND PLANTERS' TOOL

Chests. We have fitted up a number of tool chests especially for the use of farms and plantations, variously assorted with suitable tools, and at prices ranging from \$20 to \$100.

Chest No. 1 contains a Hand Saw, set of Planes, Hand Axe, Nail Hammer, Hatchet, Drawing Knife, Steel Square, Trying do., Oil Stone, Compasses, Chalk Line, four Framing Chisels, four Firmer do., and four Augers. \$20.

No. 2 contains, in addition to the above, a Back Saw, Compass Saw, and Carpenter's Adz, \$26.

No. 3 contains, in addition, a Broad Axe, Mallet, Spoke Shave, Gauge, Saw Set, Brad Awls, and Nail Patches, \$31.

No. 4 contains, also, a brace of Bits, Bevel, Rabbit Planes, Panel Gauge, four Files, and five additional Augers and Chisels, \$40.

No. 5, a large Jointer, two Rabbit Planes, two Bed do., two Match do., Plow and Bits, Hand Gauge, and Spirit Level, are added, \$54.

No. 6 has an extra fine brace of Bits, three Bed, and one additional Rabbit Planes, Gages, Files, &c., \$62.

No. 7, one Panel Square, one pair of Match Planes, one dozen heavy Firmer Chisels, Slitting Gauge, Frying Square, Fillister, and Carpenter's Rule are added, \$70.

No. 8, Gutter Plane, Sash do., Circular do., two Dado Planes, Compasses, Adz, and Tape Line are added, \$80.

To these may be added any other tools required, such as Pinchers, Pliers, Drills, Hand Vices, Patches, Rivets, Soldering Tools, suitable for repairing harnesses; and, in fact, almost any kind required upon the farm or plantation, at a reasonable addition to the price of any chest ordered.

A. B. ALLEN & Co., 189 and 191 Water st.

SELLING OFF TO CLOSE THE BUSINESS. Linnaean Botanic Garden and Nursery, late of William Prince, deceased. Flushing, Long Island, Near New York. WINTER & Co. Proprietors.

The proprietors have still remaining, a very considerable stock and variety of Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c., which they will dispose of for cash, at a reduction of 25 to 50 per cent. and upwards, from the usual prices, according to kind and quantity. Descriptive Catalogues, gratis, on application, post paid.

Apple trees, two to four years old, from \$6 to \$10 per 100. Pear trees, two to four years old, \$25 to \$50 per 100. Cherry trees, two years old, \$12.50 per 100. Orange Quinces, three and a half to five feet, \$12.50 per 100. Black Hamburg and other Foreign Grape Vines, extra strong plants, \$5 per doz. Two-year old seedling Plumb Stocks, \$7 per 1,000.

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ISAAC PULLEN,

Jan 41

Hightstown, Mercer Co., New Jersey

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Clear and authentic, copious without prolixity, it does not furnish a bald explanation of facts and terms, but a development of principles well illustrated and explained.—*Times.*

He who has no encyclopedia will find it an excellent substitute for one; and he who has, will find it a valuable supplement. While it is sufficiently full and copious to supersede the necessity for the more gigantic works of an encyclopedia character, no mere cyclopedia can supply its place.—*Eclectic Review.*

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 Yale College, New Haven. John P. Norton, Professor of Scientific Agriculture. The Laboratory of this department is now open, and instruction is given in all branches of Chemistry, Organic and Inorganic. Particular attention is paid to Agricultural Chemistry; and students in this branch have every facility afforded for acquiring a knowledge of the analysis of soils, plants, &c. A course of Lectures on Scientific Agriculture, by Professor Norton, commences in January, and continues two and a half months. This is intended to present theory united with practice in a plain and distinct manner, so that the general principles can be comprehended by all. Analyses and investigations made, on reasonable terms. For further information, apply to
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 Elevators. These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.
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NEW-YORK

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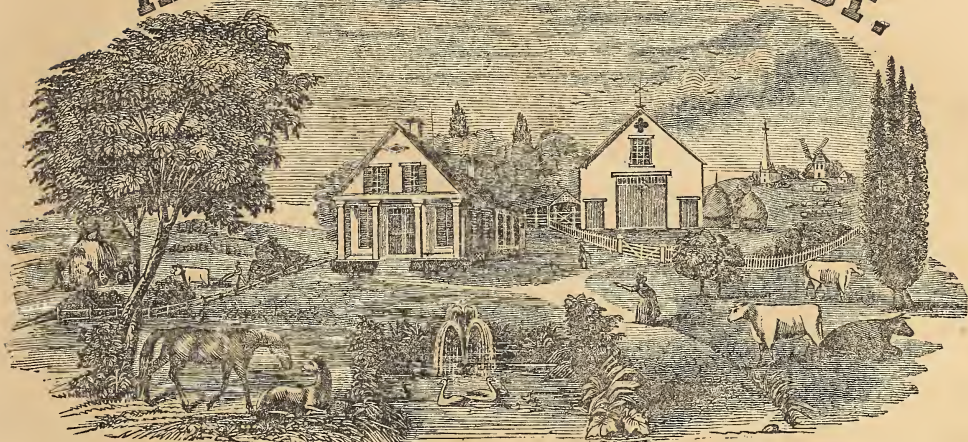
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AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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A GREAT MILKER.

The Right Sort of Spirit.—Mr. S. P. Chapman, of Mount Pleasant, New York, has a thorough-bred shorthorn cow, called Ruby. Now the said cow is a very fine one, even for a shorthorn; and in the eyes of good judges, would have stood fair any time to take a first premium at our state cattle shows. At Albany, last September, her owner would not thus enter her; but inasmuch as a few prejudiced individuals continue to assert, (although the contrary has been proved a thousand times,) that no shorthorn cow can equal a native or grade Durham for great milking qualities, he determined to test this point with Ruby; so he simply entered her as a "milch cow," to stand her chance as a milker among grades, natives, or any other breed shown. The competition was more numerous than we ever before witnessed, and yet Ruby took the first prize!

The following is Mr. Chapman's account of her performance at two trials last summer:—

Ruby, the cow for trial, was kept on grass, only, during the experiment and for fifteen days previous to each period or trial.

1st. She was five years old the 10th day of April last; is a thorough-bred shorthorn, and her time of calving this year was the 27th of May.

2d. The quantity of milk, in weight, for the first trial, from the 10th to the 20th of June, was 530½ lbs. The quantity of butter made was 20½ lbs. (One pan of milk during this trial was lost from leakage, which would have made one fourth of a pound more of butter). The quantity of milk for the second trial, from the 10th to the 20th of August, was 469½ lbs. The quantity of butter was 19 lbs. and 14 oz. The quantity of milk given each day of trial and the quantity of butter made every two days is her given:

June.	Milk.	Butter.	Aug.	Milk.	Butter.
10	52 lbs. 14 oz.	4 lbs. 8 oz.	10	45 lbs. 14 oz.	3 lbs 3 oz.
11	54 6 }		11	50 6 }	
12	50 6 }	3 14	12	48 6 }	3 8
13	52 14 }		13	49 6 }	
14	52 14 }	3 13	14	45 14 }	4 4
15	51 14 }		15	50 14 }	
16	53 6 }	4	16	44 14 }	4 12
17	52 14 }		17	48 6 }	
18	52 14 }	4 1	18	46 14 }	4 3
19	55 14 }		19	48 6 }	

It will be seen by the statement that the 16th and 17th of August, she gave 93½ lbs. of milk, which produced 4 lbs. 12 oz. of butter—or 1 lb. of butter to less than 20 lbs. of milk. The weather was excessively hot during some days of the trials, the thermometer ranging as high as 90° F. in the shade.

Ruby has given from the 10th of June to the 20th of August, a period of 71 days, 3,584½ lbs. of milk, being an *average* of more than 50 lbs.

per day. During all this time, she had no feed but grass, with the exception of two bushels of shorts, fed about the first of July.

Now as to the matter of shorthorns, as well as all other kinds of stock, we have invariably endeavored to tell our readers not only the truth, but the *whole truth*, without any sort of reservation or humbuggery; and we do assert, and challenge a reliable contradiction, that the shorthorns and their grades, when properly bred with reference to milking qualities, have proved the greatest and best milkers of any other breed or their crosses, whatever. It is true, that in several districts in England and this country, shorthorns are bred for *beef alone*—their owners do not care for milk. Under these circumstances, they are not good milkers, and no other breed would nor could be. Such breeders merely let the calves run with the cows four or five months to suck what milk they please; they are then weaned and the cows dried off. By following this course two or three years, the best cow in the world would be spoiled as a great milker; and so would her progeny; but give us the worst milking shorthorns to be found, and by paying attention to their breeding for three generations, we will engage to make five out of seven of their grand daughters good milkers.

—••—
SUBSTITUTE FOR AN ICE HOUSE.—Take a large puncheon with one head, and bury it in loose porous earth in some shady place; or for lack of such earth, dig the hole larger than the cask and fill around it pebbles, sand, charcoal, and provide a drain beneath. Make a hole in the bottom of the cask, so that it will not hold water, and leave a space under it of some inches. Now take an iron-bound tub, eight or ten inches less diameter than the inside of the puncheon, with a hole also in the bottom directly over the other. Fill the space between the tub and cask with pounded charcoal and fit a tight cover on top and cover that with a bag of coal after it is filled with ice.

—••—
BOUILLI.—This fashionable term for a very common dish, which sometimes bothers the brains of common people, is nothing but the French term for boiled meat; so that when you see *beef bouilli*, upon your bill of fair, do not imagine for a moment that it means *bull beef*, but simply beef boiled; though perhaps you will find it garnished with some herbs or vegetables with French names, which are none the better for their outlandish appellation or French cookery.

CURE FOR A BELLOWSED HORSE.

SOME few weeks since, being overtaken by a severe thunder storm on my way home, I took refuge under a shelter where were assembled several gentlemen, from the same cause. One of the gentlemen, a stranger to me at the time, thus accosted me.

"Why do you not cure your horse of the bellows?"

"For the very reason that I cannot," I replied.

"Well, stranger," said he, "when I am at home I cure all such cases, and warrant them, at \$10 a head; but as I am a long way from home, and your horse is a valuable one, I will tell you how to cure him effectually in a few days. In the first place," says he, "give your horse salt in his water, for three mornings in succession; after that, pound up a piece of bluestone about the size of a chinquapin, and mix with wet meal; give him the same quantity for ten consecutive mornings, feeding him rather lightly for ten days, and if he is not a well horse at the end of ten days, I'll give you my head."

I have tried the remedy, and it has wrought a perfect cure, and now give it to the readers of the Enquirer, that they may save their horses and their ten dollars too.

The above, clipped from one of our exchanges, is undoubtedly a very valuable remedy for a very bad disease, provided any body knows what it is. We'll be "blowed," if we do, and we have consulted every book in our library that says anything about horses, and we are still ignorant.

"Pound up a piece of bluestone." What is that? We suppose some men know the medicine; but how big is a *chinquapin*? What portion of our readers know it is a nut about the size of a piece of chalk, and a very small piece at that? But what is a "bellowsed horse"? Will somebody give some definite information about the size of a chinquapin?

WHENCE COMES THE NITROGEN THAT IS APPROPRIATED BY PLANTS?

It has been a current opinion among vegetable physiologists, that nitrogen, or azote, which constitutes a small proportion of every plant, is obtained only from the soil, or the manures which are added to it. The rationale by which this conclusion was reached was never very satisfactory to our own minds, and we are glad to perceive it has at last become equally unsatisfactory to others. Mr. G. Ville, of France, has quite recently communicated a series of experiments on vegetation, in which he thinks he

has clearly demonstrated, "that the azote of the atmosphere, so far from being an inactive element, has a very important share in the nutrition of vegetation." As Mr. Ville is a gentleman of talent and acquirements, and has devoted three years of unremitting attention to this subject, his conclusions are entitled to attention.

It has always been conceded, that carbon, (as carbonic acid,) is largely absorbed from the atmosphere by growing plants, while it has been as stoutly denied that its nitrogen conduces in the remotest degree to their growth and development. Yet, even if limited to its nutritive capabilities, only when in a state of combination, as ammonia, the exceedingly minute portion existing in the air, may, when brought to it by this constantly-moving fluid, during the entire period of the growth of the plant, contribute largely to its support. We have as yet seen only the announcement, not the details, of this alleged discovery, and we hope to be able to speak more fully on this interesting subject hereafter.

INSECTS DESTRUCTIVE TO PEACH TREES.

AMONG other things which blight the prospects of peach growers is a small green grasshopper, that lives upon the leaves, eating small round holes, from August until the first heavy frost. They commence a cricket-like noise soon after sunset, and continue through the night.

The female punctures the young bark with a sting, like a locust, and deposits a small transparent egg of an oblong shape, and closes the orifice with a kind of gum from her mouth. These eggs hatch out in April, leaving a hole from which the peach gum exudes, and a small dead spot under the bark. The grub is a small white worm, somewhat resembling the common peach worm, only much smaller. Is it possible this can be the cause of the yellows in peach trees? It is a subject worthy of investigation.

IMPORTED BERKSHIRE PIGS.—We were shown a few days since, a boar and sow of this favorite breed, which have been imported by Mr. C. W. Simmons, of Yonkers. They are from the celebrated stock of G. Hayter, Esq., M. P., of Tulsot Farm, Berks, and are very fine specimens of the breed, and will doubtless do much to improve the species in this neighborhood. They are probably the only imported Berkshires in the country. Mr. S. can be found by addressing him at William's Bridge, Westchester county, N. Y.

IMPROVED BREEDS OF CATTLE—THEIR INHERITABLE QUALITIES.

We hear frequent discussions from time to time, and nowhere in greater abundance than among the wise heads of the east, while familiarly congregated as the aggregate agricultural wisdom of some legislative body, on the superlative merits of our *native breeds of cattle*. And in this prolific and never-ending, and perhaps it might be justly enough characterised, *no-point* discussion, we hear the *Oaks cow* and the *Nurse cow* always brought forward, as conclusively settling the points in favor of "our native cattle." The most of this branch of their discussions, we must class as pure twaddle.

We have no such thing as native cattle in the strictest sense of the word. Neither cattle nor sheep, nor horses, nor even swine were found on this continent, herding with the aborigines and their scarcely less wild associates, the deer and the wolf, the elk and the bear, the moose and the catamount. They were imported—every drop of the ancestral blood—by their European masters, and bore as distinctly as any breed of the present day, the peculiarities of their race. These peculiarities have been modified from time to time, by the importation of various improved animals, which, if our forefathers had any notions of improvement, (and we readily concede them a good many, in their way,) they would not have failed to use for the improvement of their old stock. The same motive for progress would also induce them to breed their animals with some reference to the good qualities of their ancestors. The result of all this would be, the not unfrequent possession of excellent specimens, derivable in most instances, perhaps, from the direct use of choice imported animals of some favorite or superior breeds. Nobody has traced the parentage of those celebrated milkers, the Oaks and the Nurse cows; and we venture the assertion, that had this been accurately done, there would have been found, and not far before them, some choice animal, whose peculiar excellence had been augmented by some unusually fortunate combination. Yet there was not enough of this inbred superiority to stamp it indelibly upon their progeny, for it is not asserted, that any of these animals left any posterity, at all distinguished for their milking qualities.

Per contra. We can show in many of the *shorthorn* herds, that are looked down upon with so much self-complacency by these anti-improvers, numerous instances of larger yielders, whether of milk or butter, and what is of a great deal more consequence, we can show their

relations, whether in the ascending or descending line, as uniformly possessing this quality. Here is the great and overshadowing superiority of the improved breed—*transmissible qualities, reliable and unmistakable*; and we claim, too, for this breed, that while they are superior as milkers, and some families of them immeasurably so, when they have ceased to yield an abundant flow of milk, they will take on flesh as rapidly as any other breeds, and much more so than most of the falsely-styled natives.

We have selected the shorthorns as illustrating the principle we wish to establish, but of course are not to be understood as limiting the improvements to this or any other breed. Each has its peculiar merits, more especially adapting it to particular localities, or to different purposes.

 TO CURE STINGS AND BITES.

WASH the wound with water of ammonia, or a solution of chloride of lime. If the bite is very poisonous, in addition to the above, cauterise it with lunar caustic. Bites of dogs supposed to be mad, have been successfully treated in this way.

For the bite of a snake, where no other remedy is at hand, let the patient be made deadly drunk as soon as possible; this will save life upon the principle of the greater poison counteracting the lesser one. For hydrophobia, a new remedy has been discovered lately in France. The drug is called cedran. It is said to counteract, also, the bite of the rattlesnake.

PLASTER UPON CLOVER.—With the exception of a small district near the sea shore, clover is greatly benefited by the application of plaster of Paris. About one bushel to the acre is, perhaps, the most suitable quantity. Apply it upon a moist day, early in the spring. Ammonia is constantly brought to the earth by dews, rains, or snow, and the plaster acts as a collector of this fertilising matter, and preserves it for the use of the plant.

TO TAME A WILD SHEEP.—One of our subscribers informs us, that cutting the ears or tail of a sheep so the blood will run somewhat freely, has a tendency to tame a sheep quicker than any other means within his knowledge. We saw the experiment tried upon a stout wether, that was somewhat fractious; as soon as he saw the blood trickling down his face, he lay down and submitted to the hobbles without a struggle.

CHAIN GATES.

In a great many situations where iron gates are desirable, the chain gate would be preferable to any other form for strength, durability, and cheapness; and as they have never been introduced to any extent in this country, they would be quite unique in appearance, and highly pleasing to the eye.

These gates are composed of frames of bar iron and a sheet of chain work, which may be composed of small linked chains connected by cross links from every other link of the chains, or the whole be made new of any form to suit the taste.

The cost per square foot, of a sized iron like stout trace chains, would be 60 to 75 cts., the weight being about five pounds. For situations where great strength is not particularly desirable, the common wire-work gates, heretofore described, would be the cheapest. But in many places, it is desirable to have a gate or door for ventilation, which will resist all ordinary attempts to break through, while it shall be ornamental, but not heavy enough to give it a prison-like appearance. In a gate made of wire or rods, the cutting or breaking of a single wire will perhaps be sufficient to give an opening, while in the chain gate, several links must be cut before the hand of a rogue even could be thrust through to reach the lock or fastening on the other side.

A very pretty cheap gate is now in this city, made of wire crimped together by newly-invented patented machinery, which we think far preferable to cast iron; but when ventilation and strength are necessarily combined in the construction of a gate or door, no form can be given to iron equal to the chain-work gate.

The citadel of Quebec has gates of this kind, which would resist cannon shot much longer than plate iron of double the weight. Another advantage of this form of iron work, is, that contraction and expansion of the atmosphere has no effect upon it.

ICE-ICE PLOWS-ICE HOUSES.

Will you please to publish a description of the ice plow and other tools for cutting ice, and any information in your possession in relation to ice houses, cutting, packing, and keeping ice?

THOS. B. COURSEY.

Spring Mill, Del., Oct. 23d, 1850.

We cannot give any intelligible description of the ice plow and other tools used in the business, without a series of expensive engravings. Since the receipt of the letter of our Delaware

correspondent, we have written to the manufacturer of these ice-cutting implements, who responds to us as follows:—

The tools used by large companies for cutting ice, are, (a marker with swing guide,) a cutter, or plow, which can be made to cut any depth; a grooving bar, formed to fit the groove made by the plow, to break off the ice below the groove; hooks to handle the blocks; chisels to trim them for packing; sliders to move the ice upon; also saws for cutting a place for making a commencement, and snow planes. In small operations, the marker may be dispensed with and use a small plow with a guide attached. The prices of the several articles we annex:—

Ice marker,	\$75
Ice plow, or cutter,	\$50
Small plow, with marker or guide attached,	\$50
Grooving bars and chisels, each,	\$4
Saws,	\$7 to 8
Hooks,	75 cts. each.
Snow plane,	\$38 to 40.

The use of the marker is to lay out the whole field of ice so that it will cut up into blocks of exact sizes and square forms. For cutting thin ice for family use, we could probably furnish a cutter for one fourth the above price, which would answer a very good purpose.

For information about ice houses, we must refer to the back volumes of the *Agriculturist*, where the subject has been fully treated and illustrations given. See page 370 of vol. ii., and 280, 324, and 345 of vol. iv. We would willingly republish this information, only that many of our subscribers have the whole work; and to them the matter would be a repetition to which they would very properly object.

HOW TO MAKE ICE IN A HOT CLIMATE.

For the benefit of our southern friends, we now give an article on the process of making ice in the East Indies. In regions where natural ice is never seen, it is procured by artificial means in this manner: Pits are dug in a large open plain near Calcutta, about thirty feet broad and two feet deep; upon the bottoms of which are laid a bed of dry stalks of sugar cane or Indian corn, from eight to twelve inches thick. Upon these beds are placed rows of small, shallow, unglazed, earthen pans, made of a porous kind of earth; similar to our common red earthen ware, about one fourth of an inch thick, the inside being only an inch or an inch and a quarter deep. Just at dusk, of a suitable evening, which must be clear and cool, these pans are filled with soft water which has been previ-

ously boiled and cooled. In the morning, this water is found frozen into a loose mass somewhat like coarse snow and is removed before sunrise to the preserving pits, which are formed upon some high, dry situation, twelve or fifteen feet deep, lined with dry straw and coarse blanketing. As fast as deposited, it is beat down as solid as possible, until the accumulated mass becomes so cold, that it freezes into a perfectly compact mass. The pits are thatched over and secured by dry straw, which preserves it for a long time. Many hundred persons are thus employed, their success depending upon a light atmosphere and clear, serene weather, and great care to have the straw dry, as this curious effect is not, as might be supposed, altogether attributable to evaporation.

No doubt, the Boston ice trade has sadly interfered with these oriental ice manufacturers.

PRESERVING SNOW,

For summer use, has been practised in Italy for long ages. A deep conical-shaped pit is dug in dry porous ground, and lined with faggots and straw, and provided with means of drainage. The snow is gathered and packed very tight and covered over with dry straw and a double-thatched roof which keeps it even better than blocks of ice will keep.

But it is not at all necessary to dig a pit to form an ice house. If a mass of snow or ice were piled up in a conical form, six or eight feet high, and covered over with a stack of straw, it would keep all summer.

VEGETABLES AND FRUITS IN USE IN ENGLAND AT DIFFERENT SEASONS OF THE YEAR.

January.—Cabbage, colewort, sprouts, Savoys, leeks, onions, beets, sorrel, endive, chervil, spinach, celery, garlic, shalotes, scorzonera, potato, parsnips, turnips, broccoli, lettuce, cresses, mustard, rape, salsify, various herbs; also cucumbers, asparagus, and mushrooms, though out of season. Fruits—apples, pears, grapes, melons, walnuts, and other nuts.

February and March.—In addition to the above, kidney beans and forced strawberries.

April, May, and June.—In May, new potatoes, early peas, kidney beans, carrots, turnips, early cabbages, cauliflowers, asparagus, artichokes, and all sorts of forced salads.

In June, strawberries, cherries, melons, green apricots, currants, gooseberries, pears, grapes, nectarines, peaches, and some other fruits; nearly all of which are grown for the London market, and of course very dear.

June, July, and August.—Vegetables of all sorts abundant, particularly beans, peas, potatoes, French beans, onions, cabbages, &c.

In July, strawberries, gooseberries, pine apples, plums, cherries, apricots, raspberries, melons, currants, damsons. In August and September, peaches, plums, figs, filberts, mulberries, cherries, apples, pears, nectarines, grapes, pines, melons, strawberries, medlars, quinces, Morello cherries, damsons, and other late plums.

October, November, and December.—Carrots, turnips, parsnips, potatoes, skerret, scorzonera, onions, leeks, shalotes, cabbage, Savoys, colewort, spinach, chard beets, cardoons, cresses, endive, celery, lettuce, salad, and pot herbs. Some of these last mentioned continue into October; then apples, bullace plums, medlars, damsons, quinces, &c., and others as in January.

Many of the fruits that grow luxuriantly in America, in the open air, can only be grown under glass in England. The advantages of cheap fruits, every one may possess in America, cannot be enjoyed by the common people of England. Peaches, such as often sell in the New-York market for one dollar a bushel, would sell in London for a dollar or even two dollars a dozen.

VILLAGE LECTURES.—No. 4.

The Soil and the Air Continued.—Take a jar full of oxygen gas; it is not common air, though air contains it, and it is to the oxygen that the air contains, that it owes its ability to burn things, and its ability to maintain respiration—the breath of life in living animals. In the air, this gas is mixed with another, called nitrogen, which dilutes the former, so as to make it fit for the ordinary conditions of human life; were it not thus diluted, it would be much too violent in its action. I have here a jar full of it, and you will see that it makes use of the least spark to produce a flame; so that if the air were pure oxygen, every spark would end in a conflagration.

I shall burn this piece of wood in this oxygen gas. Now, on removing the wood, I find a portion of it has disappeared—it has burned up—it has united with the oxygen gas, and is now in this jar, in the form of a clear gas. The gas is of very different properties now; the oxygen gas being satisfied by union with the charcoal in this way, has no longer any appetite, so to speak, for union with other things of the same kind; it will not now unite with the substances of tallow, and consequently so far from encouraging that chemical action which is pro-

ductive of flame, it would extinguish flame immediately on its being brought in contact with it; and therefore, also, so far from encouraging that chemical action which goes on during respiration of animals, and to which the healthfulness of a fine bracing air is owing, it extinguishes that chemical action at once, and would choke any animal that fell into it; but to this point we shall refer again.

Now, if I prove that the air contains this gas, the carbonic acid gas, as it is called, which contains the charcoally part of wood, then I shall have proved that the air contains the very substances which we find in trees and plants, and which they take from it in the act of growth. and this is the way in which I prove that. The carbonic acid gas is recognised not only by its extinguishing flame and destroying life, but by this curious property, that when united with lime it forms a chalky insoluble substance; so that if I pour some clear lime water into this jar of it, and shake it up to induce the lime of the water to unite with the gas, it will become white and milky in appearance, owing to the formation of this chalky, insoluble substance, as you see. Now, if I can pass a quantity of common air through some lime water, and the lime water, originally clear, becomes milky in this way, it will be because it, too, contains carbonic acid, and I shall thus have proved that there is in the air, a gas which contains the very particles of charcoal which our plants and trees require for their growth. Of course the air contains a very small portion of it, not so much as $\frac{1}{1000}$ of its bulk; because, if it contained much, it would destroy life instead of preserving it; and I must, therefore, employ an apparatus which enables me to draw a large quantity of air through a small quantity of lime water; such an apparatus, in fact, as I have here, where the water below falls out and pulls the air in after it, through the lime water in this crooked tube; and you see that though clear before, it is muddy enough now, owing to the formation of chalk in it, or carbonate of lime; and I have thus proved that the air contains the carbonic acid gas which was necessary to form this chalk, contains charcoal—contains the substance of our plants and trees.

The air, then, contains charcoal, and gives it to plants. The fact is, that carbonic acid gas is a compound of charcoal and oxygen; you saw it formed when I burned the charcoal in the oxygen; and the fact is, that, in the sunshine, plants absorb the carbonic acid, take its carbon, or charcoal, and give back its oxygen pure to

the air. But before you can see the beauty of this process, for it does appear a really beautiful thing when rightly understood, it is necessary for you to know the properties of these two gases. Carbonic acid gas is “choke damp;” it sometimes collects in old wells and pits, and would then kill any one who enters them. It is heavier than common air, and so sometimes collects in deep places. There are places where this gas accumulates on the surface of the earth. There is a valley in the island of Java, in the bottom of which there is a spring of this gas, and accordingly the valley is a lake of carbonic acid gas, and it is, in reality, what is called, the Valley of Death. Travellers who have visited it describe it as an utterly barren basin, with a rim of remarkably luxuriant vegetation, and the skeletons of animals cover the ground beneath; they had wandered in, been choked by the gas and died. There was a skeleton of a man lying a little way down the slope; he had unwittingly entered the fatal lake of air, been intoxicated by breathing it, for it is a narcotic poison, and lying down, had died. No one dared venture to enter the fatal air to help or recover a friend without the certainty of sharing his fate.

Now, wherever oxygen is united with charcoal, it is forming this deadly destructive gas; and every fire that burns, and every dunghheap as it rots, and every breath that is drawn, is simply a uniting of the charcoally substance of wood or coal, or straw or food, with the oxygen of the air, and is constantly giving out carbonic acid gas. And the air, though it contains but little proportionally, contains a great deal of this gas actually. There is but $\frac{1}{1000}$ part of the air that is carbonic acid gas, but then there are 42,000 tons of air resting on every acre of the earth's surface, so that there are actually 400 lbs. of carbonic acid gas—a quantity containing 100 lbs. of charcoal—in the air over every square perch of ground; and this, of course, increases with every breath that is drawn, and every fire that is burned, so that we might suppose, in the course of years, the atmosphere would become loaded with this gas, and animals would be unable to live in it; and no doubt this would ultimately be the case; for besides the fires which are thus making the air unfit for animal life, animals are rapidly making it unfit for themselves. Each of us gives out carbonic acid gas with the air we breathe—our lungs are in fact, a little fireplace within each of us, where our food is in a great measure burnt up, and our windpipe is the

chimney by which the products of that combustion are sent into the air. It is in this way that the heat of the living body is kept up, whatever the coldness of the air. Whenever carbon unites with oxygen gas, heat accompanies the chemical action, and whether it be the coal in our fireplace, or the straw in our dungheaps, or the tallow in our candles, or the food in our bodies—the union of the oxygen of the air with the charcoal they respectively contain, affords heat—heat in proportion to the rapidity of the process of union and the quantity of carbon in the fuel; and so, in order to increase this heat and induce the oxygen to combine rapidly with the charcoal, we build chimneys to draw the air through the furnace, or we turn over our

proportioned to the quantity of charcoal which can be got in a given time to unite with the oxygen of the air; and so the cold-country man makes a perfect oil lamp of his lungs within him, and takes boisterous exercise to keep the bellows blowing, in order to preserve his warmth; while the hot-country man of placid temper and sluggish movement eats sparingly, employing less fuel, because he loses less heat.

BULLOCK'S PORTABLE PROGRESSIVE POWER PRESS.

FIG. 7 is a side view of Bullock's Portable Progressive Power Press. Fig. 8, is an end view of the same, with the follower run up and pushed one side preparatory to filling the box.

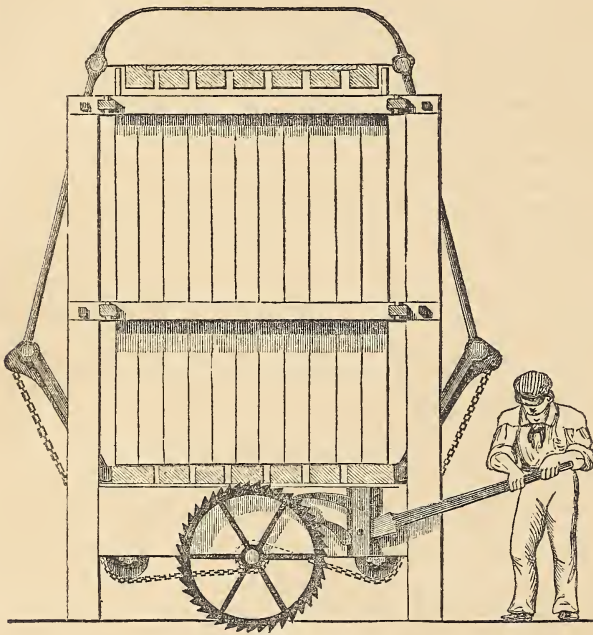


FIG. 7.

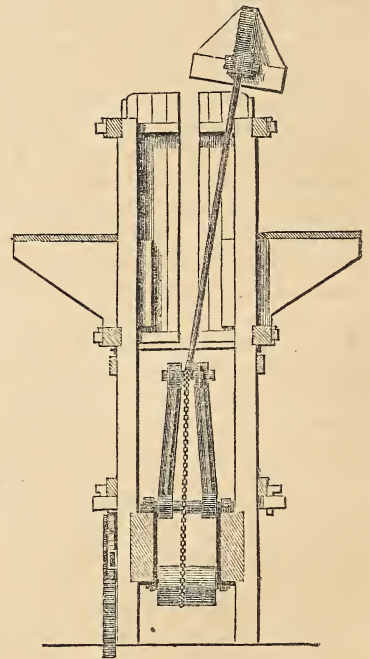


FIG. 8.

dungheaps to cause the air to mix with them more thoroughly, or we run about and take exercise in order to breathe the faster; and so the furnace gets hotter, and the dungheap heats more rapidly, and we get warmer; or perhaps the heat is increased by using substances which contain more charcoal to unite with the oxygen gas; and in this way, coke makes a hotter fire than wood, and oil or camphine, a brighter light than tallow; and for this reason, too, the Esquimaux of the arctic regions eats enormous quantities of blubber, while the inhabitants of the hot countries of India and China live sparingly upon rice. The heat in every case is

These presses are in use in this city for baling dry goods, rags, cotton, hay, wool, hemp, flax, paper, moss, &c., and they are taking the place of other presses throughout the country. Manufacturing establishments and warehouses, are generally adopting these presses on account of their great *convenience, power, and durability*, and the dispatch with which the work is done.

TO MAKE BOOTS WATER PROOF.—Melt 3 oz., each of rosin and beeswax, and stir in 1 pint of boiled oil and heat all well together; when partly cool, add 3 oz. of oil of turpentine. Apply hot with a brush.

NOTES FROM A KITCHEN GARDENER'S MEMORANDUM BOOK.—No. 1.

It being my custom at the close of the year, to review my gardening operations of the past seasons, every day's work of which is noted in a book kept for such purpose, from which, in many ways, I derive much benefit; and, noticing your frequent invitations to all interested in similar pursuits, as well as to the more extended branches of agriculture, to send in anything that may to them appear interesting, I now hand you the inclosed, which is at your disposal.

Bergen, N. J., Dec., 1850.

J. P. G., JR.

Manure and Manuring.—As soon as the ground, which is clay loam, is cleared in autumn, I spread over it barnyard manure, selecting that which is well rotted, and free as possible from seeds, which is incorporated with the earth by deep digging. In spring, I break it up again, and apply a moderate coating of wood ashes, on which is immediately applied a coating of powdered charcoal, and with a strong rake thoroughly mix both with the soil. The barnyard manure is used to keep the land in substance, or heart; the ashes to supply potash, which enters largely into most of the garden products; the charcoal to furnish free carbon, which, in addition to the carbonate of potash furnished by ashes, is said to be freely taken up by the plants. I have observed this course of manuring to be attended with beneficial results.

The past season, I made the following experiment by manuring the ground for beets and carrots, a quantity of which, the previous year, I raised for fodder, and when feeding, collected both the solid and liquid parts of the manure, made from each species of root separately, and in the spring, applied it to the respective plants, and found the result highly satisfactory; and I would be glad if others would make similar trials, with the view of simply illustrating the principle of manuring as taught by agricultural chemistry, which I understand to be that of returning to the soil, a portion taken from it, and furnishing the plants food, which they most readily assimilate. Having practised this mode of manuring but one season, I cannot positively assert that the fine growth of roots was to it attributable, and at present, intending to pursue it another year, would like to have the views of others respecting it.

Lettuce.—Though preferring the curled varieties, they being more tender and handsomer in appearance, I planted on the 16th of September, the "hardy green," to stand the winter, in order to have a full supply of plants to put out early

in spring, with the view of ascertaining what number can be raised on ground, which, during their growth, would not otherwise be occupied. Not being particular in choice of location—though doing best in damp ground—they can be grown almost anywhere; and requiring but a short season to attain a size suitable for the table, they may be set out on ground intended for tomatoes, egg plants, melons, okra, peppers, and between rows of early cauliflowers, cabbages, bush beans, parsnips, beets, &c.; and not being inconvenienced by partial shade, will do well between rows of peas, pole beans, and early sweet corn.

In my opinion, the science of kitchen gardening consists, in connection with producing handsome and early vegetables, in obtaining the largest quantity from a given piece of ground, which can only be accomplished by close observation, constant cultivation, and a liberal application of manure.

Spinach.—No kitchen garden should be without a bed of this early and wholesome vegetable. The "broad-leaved" variety, I consider preferable, which, when cut at suitable time, and properly dressed, is esteemed by me, as one of the best productions of the garden, and should not be neglected, especially by those who do not cultivate asparagus. For the last three years, I have raised spinach and melons on the same ground. In autumn, after the melons are off, I sow spinach in drills one foot apart, which is usually cut by the time the melon plants are ready to be put out. Should its growth be retarded by a backward season, put out the melon plants precisely as if there were no spinach sown, which can be done with but little interference; and before they require other than a small portion of the ground, the spinach will be over. Ground well manured and timely hoeing is all the cultivation required.

Peas.—Of all the varieties with which I am acquainted, the "Prince Albert" is the earliest; and in order to have this delicious vegetable early, it is worthy of cultivation; but for a general crop, it is by no means profitable. The yield is light, the pods short, and the fruit very small. By some, the "cedo nulli" is chosen for an early pea; but I am convinced that it does not fruit so quickly as the Prince Albert, and like that variety, producing small fruit, and yielding light, I consider it not desirable.

For a succession, I prefer the "early emperor," which comes in about ten days later than the Prince Albert, producing a fair crop of medium-sized and finely-flavored fruit.

Next in rotation, I plant "Fairbeard's champion of England," which, in quick succession, follows the early emperor. It is a profuse bearer, producing large and well-flavored fruit, in a lengthy and well-filled pod, and is esteemed by me, best of all the peas I have cultivated.

For a later variety, the "British Queen," on account of its superior size, as well as agreeable flavor, is desirable. The vine, however, is lengthy and stout, and requires to be well rodged, or else it is troublesome.

"Carter's Victoria" is a good variety, which comes in after the champion of England; it is good for a succession, but I do not esteem it so highly as the British Queen.

As far as my experience extends, the "Queen of the Dwarfs," a recent variety, is scarcely worthy of cultivation. Its growth is bushy, producing its fruit singly and unevenly; and however much it may be prized in England, where it originated, here, while we have so many other varieties better adapted to our climate, I intend, for the future, not to cultivate it.

On the 10th of August last, I planted the Prince Albert, on account of its rapid advancement to maturity for autumn use. In the last week of September, the fruit was suitable for the table. The vines were of thrifty appearance, and were much admired. Next year, I purpose planting on the first of August, with the view of having a longer continuance of this fine vegetable. If planted too early, however, the vine is of slender growth, and both vine and pod are liable to mildew; the yield is light, the fruit not well flavored, and when grown during hot weather, the result is apt to be an unsatisfactory crop.

VENTILATION.

Of all the faults of farm houses, perhaps the want of ventilation is the greatest. One would suppose people who live in the constant enjoyment of the free air of the country, would feel the necessity of the same kind of atmosphere within their dwellings, particularly in their lodging rooms. Old-fashioned farm houses, constructed with large open fireplaces, never suffered for want of ventilation; the fireplace acted as a ventilator, and was always open.

Modern-built houses are warmed with hot-air furnaces, or close stoves, often heated with coal to a red heat, by which a great saving of fuel is effected; but it is at the expense of an increased consumption of human life.

It is a notorious and undeniable fact, that the old-times, hardy race of New-England farmers, who used to crack nuts and drink cider around

the old-fashioned mammoth fireplaces, so vividly engraven upon our own mind, have passed away and left a puny, pale-faced race sitting around the stoves of modern-built country houses, close-fitting windows, and listed doors, shutting out the pure air of heaven, while man within, after breathing carbonic acid gas for a whole evening, wonders what makes him feel so languid and unfitted for the enjoyment of social intercourse with his family; but, as he is unable to arouse his spirits, he retires to rest in a room heated to the same degree, and just big enough to contain himself and wife, and children, which he closes almost as tight as though it were hermetically sealed; then buries himself in the soft embrace of a feather bed and pillows, and after ten hours of thus tempting death rather than rest, "he wonders what on earth makes him feel so poorly of a morning."

He can read the history of human suffering in the black hole of Calcutta, and easily imagine that death ensued for want of air; but he cannot understand that his own complaint arises from the same cause. The amount of popular ignorance upon this subject is astonishing. The windows of every room, heated by hot air or tight stoves, should always be open at the top. In fact, no room should ever be constructed without permanent provision for ventilation.

Dr. Arnott, an eminent physician and philanthropist, of London, had this subject so strongly impressed upon his mind, that he invented an apparatus for this purpose, called a chimney valve. It is a very simple, yet effective contrivance. A square box or frame, of cast iron is set in the chimney near the ceiling, having a valve so nicely adjusted, that a slight pressure of impure air in the room, will cause it to open, or it may be set open by an adjusting thumb screw. When closed to correspond with the wall, it is hardly perceptible. Ornamental ventilators might be constructed in the ceiling of every room; and in all lodging rooms, they should be made permanently open. The health of thousands of persons is sacrificed every year by the poison of crowded assembly rooms, over heated and ill-ventilated dwellings, and more than all, narrow-contracted, never-ventilated lodging rooms. We shall recur to this subject again.

RICE contains the least fatty matter of any of the cereals, but the greatest proportion of starch averaging about 82 per cent.

VALUE OF DOGS.

A LITTLE girl near Cincinnati was lately seized by one of those abominable brutes, that semi-civilised man still persists in keeping as his fit companion, and her life nearly destroyed, before those, whom her terrific screams brought to her assistance, could extricate her from her perilous situation. The bull dog had seized her by the throat so fiercely, that his jaws had to be pried apart, after his back had been broken, by a blow of a club, that was used to beat him off his human prey.

The blood flowed in streams, and the flesh was so lacerated, it hung in shreds; and the poor child will carry the marks as long as she lives. This is one more item in our *dog account*. We have others.

REVIEW OF PROFESSOR JOHNSTON'S NOTES ON AMERICAN AGRICULTURE CONTINUED.

WE continue the comments which we commenced last month, upon these notes.

It is evident the writer only saw a few of our farm houses, or he would not have said "they are commodious and generally well arranged;" neither would he have said "the kitchen is always the largest apartment in the house." This was notoriously the case in the old-fashioned farm houses of New England, and among some of the substantial old Dutch farmers, as it always should be; but it is equally notorious that many of the modern farm houses have apparently been in one respect modeled after the Capitol at Washington; that is, the architect has made it a study to see how inconvenient and inappropriate, for the purpose, he could possibly construct a building, and how many little miserable, dark passages, and illcontrived little rooms he could crowd within four walls, up stairs and down stairs, and among these, not one could be found suitable for a commodious kitchen. Such is the fact in regard to many a modern American farm house.

The isolated out houses, which seem to strike the writer with so much force, are a peculiarity that is carried to a greater extent in America than in any other country. "The entire absence of all appearance of grain stacks" noticed by the writer, shows he did not extend his travels into the southern nor western states, where he might have seen a score of stacks around a single farmstead, any one of which would fill all the buildings upon the newly-commenced farm. Instead of its being a fact that "all crops of corn and hay are housed," in this country, much the largest portion of all that is

grown in the west and south, and the quantity is enormous, never was beneath a roof, however rude. It is to be regretted this excellent writer, who is disposed to give his countrymen so much correct information of ours, could not have seen much more even than he did, in the few months he was with us; and have seen a part of the country, too, that has been but a few years in possession of the all-subduing Anglo-Saxon race, who are driving the red man far away from the ancient haunts of his fathers, and changing his hunting grounds into cultivated fields. No doubt, while undergoing the transition, these incipient farms must have a very unprepossessing appearance to one so accustomed to the highly-cultivated estates, fenced with the neat green hedge rows of England.

The statements in the following sentences are entirely too general, and will not give so correct information as is desirable. He says:

"As may be supposed, vegetation proceeds very rapidly. In the northern states, though the winter can scarcely be said to be broken up till April, barley is generally ready to be cut early in June; wheat is ready towards the end of the same month. Oats are ripe in July; Indian corn in September, and the buckwheat crop immediately succeeds the corn."

Here are a succession of mistakes. The fact is, the area of the United States is too large and too varied in climate, to be comprehended by the inhabitants of a small island. Even the people of one of the states, that harvest wheat and oats in May, can hardly conceive it to be a fact, that in another state of the same Union, the harvest time for the same grain is September. Long after the period when Indian corn is ripe enough for eating in Louisiana, Vermont, New Hampshire, and Maine begin to think of planting. In the above paragraph, the writer says "barley is ready to cut early in June, in the northern states." The above-named states are the northern ones, and their barley is often sown instead of reaped in June. While but little wheat, except that sown in spring is ever raised, and certainly in the northern part of those states, that is cut in September. Oats, in the southern part of New York, may be ripe early in July, while in the northern part they are still green in the latter part of August.

There are some things in the following sentence worthy of comment: "It is scarcely exaggerating to say that, after a slight shower during the night, succeeded by a fine, sunny day, you see the crop growing. Certain it is, that, measuring barley stalks in the morning, you will

find in the evening no mean addition to their length. This rapidity of growth causes the crop of oats to be generally a poor one; it grows so rapidly that there is no time for the grain to fill properly. A farmer in the state of New York informed us that with all his care, and in spite of all his knowledge of the crop, (he had been a Scotch farmer,) he could never depend upon a good return. And yet, his meal was fast getting into repute. The Americans are generally fond of oat meal; indeed, it fetches a high price; but yet the supply is exceedingly defective."

The rapid growth of vegetation under the genial showers and hot sun of America is always a matter of surprise to one accustomed to the long, slow growth of crops in England. But is the writer correct in saying "the crop of oats is generally a poor one?" What is a good one? Is fifty to eighty bushels per acre, with a growth of straw which gives an enormous quantity of forage for cattle, a good crop or a poor one? If good, then the crop is not "generally a poor one." Perhaps some of that "Scotch farmer's" Yankee neighbors, who better understand the climate of New York, can beat him every year in the oat crop.

Since when, are "the Americans generally fond of oat meal?" It must be within the last year, if ever, since the first settlement of America. According to our notions, oat meal never will be generally used here. Millions of Americans eat the finest wheat flour, of grain not worth fifty cents a bushel. Other millions eat that sweetest, cheapest, and most nutritious human food, Indian corn, when the average market price is less than one shilling sterling per bushel. None live upon potatoes, though they might, at half that price per bushel. In the same districts, the average price of rich, fat beef and pork, for the last half century, has not been equal to two pence a pound; and sheep are annually butchered by the thousand for the hides and tallow, while the meat is thrown to the hogs to make cheap pork. Do you think people in such a country will eat oat meal? No. They cannot afford it, except by way of *something new*, as a luxury.

The very next sentence, from the same article tells the reason why "Indian corn is the staple commodity of American farms; it is used in all kinds of ways. One variety is taken in its green state and boiled. Its flavor is remarkably fine, and resembles very much that of green peas. Judging from our own experience, we should say that it would take some time for

a European to relish the vegetable; it is too sweet and rich for all tastes. The Americans are amazingly fond of it. Indian corn is sown in what is called "hills." Some species grow very high; we have seen stalks ten to twelve feet in height. It is a noble-looking plant. The varieties are very numerous. Dr. Brown, of Philadelphia, enumerates upwards of forty kinds. The editor of the "Maine Cultivator" says that it would be an easy task to make out sixty varieties. The growing capabilities of the various species differ very much. Some spring up quickly, and soon ripen; others spring up more slowly, and ripen later. Some have six or eight rows of grain in the ear, others have as many as twelve and fourteen. In some, the grains are all of one color, in others, variegated—yellow, mixed with red, scarlet, purple, and black. These are, however, very small. Indian meal is much relished throughout the states. Indian-meal porridge, or "hominy," as it is there called, is very delicious, when taken with new milk. Pumpkins are generally grown between the "hills" of Indian-corn plants; they require very little tending, and grow to an immense size. A yard, and even a yard and a quarter, is no uncommon size to be found. These pumpkins are wholesome and nutritious food, both for man and cattle. "Pumpkin pie" is considered a great treat."

Upon this we comment. First, Indian corn is not the staple commodity of American farms. Thousands and thousands grow none for exportation, while other thousands do not grow enough for their own use while engaged in producing the staple crops of American farms, known in commerce as cotton, hemp, tobacco, rice, sugar, wheat, beef, butter, cheese, wool, stock, fruit, grass, and even potatoes, all, and each of which are staple commodities upon some American farms, where corn is only a secondary crop. Did the writer intend to *slur* the "corn crackers" by conveying the idea to his countrymen that America produced but little else; and that the principle human food is Indian-meal porridge, or hommony, or Indian corn in some shape? He says "it is used in all kinds of ways," and might have added, one of which is to send our surplus millions of bushels to feed the starving millions of potato and oat-meal eaters, of a country which boasts of her good farming and productive acres. "One variety is taken in its green state and boiled." So are fifty-nine others of the sixty varieties that might be named; though we prefer that known as sugar or sweet corn, for the very

reason that the writer thinks a European would not; that is, because it is so sweet and rich. But we can assure him that all Europeans soon acquire the taste, and do like "green corn boiled or roasted." The writer says its flavor resembles green peas. According to our taste, of half a century standing, the resemblance is in nothing except that both are sweet. "Americans are amazingly fond of it." And so are the Africans, Asiatics, Europeans, and the inhabitants of the forests and mountains, and islands of the sea, including birds and beasts that walk on land, swim in the water, or fly in the air. All are fond of Indian corn, and some of them are very destructive to the farmer's crops. "Indian corn is *sown* in hills." No, the universal term is *planted*; and as much is grown in drills as hills. "We have seen stalks ten or twelve feet in height." And we have often seen them fifty per cent. higher. Some specimen stalks were exhibited at the state fair, at Syracuse, that were grown in Illinois, eighteen feet long. Much of the corn of the northern portion of our country does not exceed five feet.

"Pumpkin pie is considered a great treat." Is it? Perhaps so, to an Englishman. Certainly not to a Yankee, as they understand the term *treat*, which means something extra and out of the common every-day line of fare—some costly luxury, while that most rich, and in one sense, luxurious dish, pumpkin pie, is one of the most common articles of food in autumn, in all the northern states.

The writer speaks in glowing terms of the quantities of wild berries, and the common custom of giving them with sugar, as a sort of desert to "farm servants," with almost every meal—a name by-the-bye that is given to all laborers upon English farms, who have permanent situations, and a very good and appropriate one, but very unpalatable to some of our democratic, all-men-are-equal sort of people. We wish the writer could have seen some of the *sights* of blackberries that we have met with, particularly in "old clearings" along the Ohio River, where we have seen at one view, hundreds of acres covered with this rich fruit in such abundance, that a thousand hands could make but little impression upon the quantity.

Of another wild fruit he says, "Nothing can surpass the beauty of the hanging clusters of wild grapes to be found in the woods. In some places, they are amazingly plentiful; above and around, on all sides, the graceful pendants are seen. They are, however, very small, and exceedingly sour." So said the fox in *Æsop's*

time. But we say the time was, when we were young, and used to climb after these graceful pendant-hanging clusters along the banks of the Quinebaug, we found them neither small nor sour. What say our friends who fatten upon the Scuppernong and Catawba wild grapes of America? Are they "very small and exceedingly sour," or is this writer just a little mistaken in his description?

"In the state of Ohio, the hazelnut trees are found in the woods in amazing quantities. They grow very low, not much higher than our gooseberry bushes, but they are very prolific." "In the state of Ohio," and by inference the idea is conveyed to English readers that they grow nowhere else, while in fact, they are as common as blackberries in half the states of the Union.

If the writer or any of his readers are troubled with indigestion, we hope they won't eat many "dried apples" cooked after the following recipe:—"Apples for domestic use are first peeled, or pared, (by a machine in most cases,) and cut up into four or six pieces, and strung upon ends, and hung up to dry. They keep for any length of time. By putting these dried parts of apples along with a little boiling water and sugar, a delicious dish is readily obtained, equal in every respect to stewed apples." To cook dried apples so as to render them at all fit to eat, requires several hours of gentle stewing, instead of merely adding "a little boiling water and sugar." When well cooked, they are delicious, either as a sauce or in pies or dumplings; but when ill cooked, or only spoiled with a little hot water, they are no more fit to eat than raw tripe.

There are several errors in the following statement which we will endeavor to point out. "The wages of farm servants vary in different states and localities. We here give a statement regarding them. In a large state, such as New York, wages will vary considerably in different sections; the average is endeavored to be given:—

	Per day. Cents.	Per month. Dollars.
Maine, New Hampshire, and Vermont,	62	12
Massachusetts, Rhode Island, Connecticut,	75	12 to 15
New York,	50	10 to 12
New Jersey,	75	12
Pennsylvania and Ohio,	50	10
Maryland and District of Columbia, (white,)	50 to 75	10
*Virginia, North and South Carolina,	50	10 to 12
Georgia, Kentucky, and Tennessee,		
(White,)	25 to 40	5 to 10
(Colored,)		
Alabama and Mississippi,	25 to 30	12 to 15
Louisiana, Florida, and Arkansas,	50	15
Indiana, Illinois, and Michigan,	50 to 75	8 to 12
Iowa, Wisconsin, and Missouri,	75 to 91	10 to 15

The states marked thus* are grouped together, as they present very similar features of position

and distribution of population. They all embrace lowlands and highlands. In the former, slaves perform nearly all the manual labor; in the latter, there are comparatively few slaves, and white labor predominates. In the states further southwest, labor is nearly all performed by slaves, but is more valuable, because more productive, arising from greater fertility of soil." The grouping of these states presents a curious feature to a native. If the writer, or anybody else, can tell why wages in New Jersey should be set down at "75 cents a-day," while in New York and Pennsylvania, lying upon three sides of her, they are only 50 cents, he will unravel a mystery. Our explanation is, the mystery is like many others, when inquired into—it don't exist. The states marked with a * are grouped together on account of "similar features of position, &c." The only similarity as regards wages, is, that they are all slave states. Two of them are great cotton and rice-growing states, and two others grow little, or none; two others grow a small portion only. Virginia is a great wheat state, and Kentucky and Tennessee, great corn-growing states. The greatest error, though not intended to be so understood, yet, as it is worded, cannot well be understood as the author intended it should be, is in the statement that says, "in the former, slaves perform nearly all the manual labor, &c." The antecedent of the word *former*, appearing to be the first-named in the list of states. "Further south, labor is more productive, arising from greater fertility of soil." How far south? In Texas, or some other unannexed state, the others being all named, excepting Delaware, which seems to be so small it is entirely overlooked, and California, which has since become a state. It is a very great error to convey the idea that the southern states have a much larger proportion of fertile soil than the northern ones, for such is not the fact.

THE PRINCESS TRIBE OF SHORTHORNS.

MR. STEVENS stated some time ago, that the Princess tribe of shorthorns traced *further back in the Herd Book, than any others*, which position I thought doubtful. He undertakes to prove it by running back to Tripes by the Studley bull.

On page 41, volume 1st, English Herd Book, you will find, (No. 188,) Dalton Duke, bred by Mr. John Charge; got by Mr. W. Dobson's bull d. by the Studley bull. This bull traces back as far *in the Herd Book*, as any of the Princess tribe, and of course, I am right. I showed, also in my former article, that Mr. Bates had used other blood in his herd besides the Princess

and Duchess blood, since 1831. So that I consider this position cannot be reasoned or explained away. It will be seen by referring to Mr. Bates' catalogue of sale, that he had used the descendants of his Matchem cow very extensively.

SAMUEL D. MARTIN.

Colbyville, Ky.

REPLY TO DR. MARTIN.

DR. MARTIN has *unfortunately* selected in the bull Dalton Duke, (188,) a poor weapon to defeat me. He quotes from the 1st volume of the Herd Book. In that volume, page 147, is this: "691 Wetherell and Maynard's bull (see Dalton Duke)." The numbers are of the same bull. Mr. Charge bred Dalton Duke, and sold him to Messrs. Wetherell & Maynard; he was known both as "Wetherell & Maynard's bull," and as "Dalton Duke." A second edition of the first three volumes of the Herd Book was published in 1846, and was edited by Mr. Henry Strafford, than whom there is no better authority; indeed, none so good in England. In this second edition, under the head of, "(691,) Wetherell & Maynard's bull, or Dalton Duke, (188,) is this bred by Mr. John Charge; got by Mr. William Dobson's bull, (218,) d. by the Studley *White* bull (627)." Mr. Strafford both corrected and extended the pedigrees, in his edition, and from information properly derived. On examination of Mr. Charge's pedigrees everywhere in the Herd Book, they will be found to end with a descent from the Studley *White* bull (627); and Dalton Duke descended in the same way. In the first edition, in the pedigree of Dalton Duke, the word *white* was omitted, and the pedigree thus made incorrect, and Mr. Strafford corrected it in the second edition. It is due to Dr. Martin to say, that he could not know this, unless he had the second edition of the Herd Book, which is not probable. So, then, Dalton Duke does not go back in the female line to the Studley bull, (626,) and of course, Dr. M. is wrong, and I am right. I will take occasion here to mention, that the following bulls in the first volume of the Herd Book, are of the Princess Tribe, viz: Bacon's son of Comet, (46,) Baron, (58,) Carlisle, (115,) Cleveland, (142,) Robert Colling's white bull, (151,) Custard, (183,) Foljambe, (263,) Harlequin, (289,) Marske, (418,) Plato, (506,) Simon (590). The following cows in the first volume of the Herd Book, are also of the Princess family, viz: Barmpton, page 169; Belinda, page 178; Blossom, page 187; Brighteyes, bred by R. Colling, page 194; Brighteyes, bred by R. Colling, page 195; Buxom, page 203; Countess, bred by R.

Colling, page 248; Haughton, page 330; Liberty, page 374; Mayflower, page 403, by Robinson's bull. These are named, as their pedigrees in themselves do not show their alliance with this distinguished family. Charles Colling bought of Alexander Hall, the cow Haughton, descended from Tripes by the Studley bull, (626,) and Robert Colling bought of Alexander Hall, the cow Brighteyes, by Hubback, and she descended from Tripes by the Studley bull (626). The above-named bulls and cows descended either from Haughton or Brighteyes. The cow Princess, that has given name to the whole tribe, was a granddaughter of Brighteyes, by Hubback. Besides this Princess family, (which includes all the descendants of Haughton and Brighteyes, both by Hubback,) *there is not a single shorthorn in the world, that can, by known animals, go back in the female line, to the Studley bull.*

In an article written in December, 1845, and printed in February number of the American Agriculturist, 1846, I said of Mr Bates, that "up to the introduction of Belvedere to his herd, he had adhered to his Duchess blood entirely, except in the case of two or three cows put to Marske. * * * * Since 1831 Mr. Bates has used that blood, a union of the Duchess and Princess tribes, *mainly*, and has only resorted to any other in one instance, viz: "Cleveland Lad." In a former article, Dr. Martin quotes this, and in reply, says, that "Mr. Bates used Bertram, Gambier, and Norfolk, neither of them of the Duchess or Princess tribes." I replied that Mr. Bates purged out of his herd all the blood of Bertram and Gambier, except in his Oxford premium cow and her descendants. The terms "adhered to" and "had used," mean *in the use of bulls*, as every breeder well knows. As Dr. Martin quotes me, and as I wrote, it will be observed that I use the word *mainly*. I knew Mr. Bates had used Gambier and Norfolk, and Duke of Cleveland, (by Bertram,) after 1831, and therefore, I said "mainly." But I knew that he had got rid of every drop of Gambier's blood, and of Bertram's, except in Oxford Premium cow; and that after 1831 to 1842, he had not used a bull as a system, except Belvedere, a Duchess bull, or Cleveland Lad. In my remarks, quoted by Dr. Martin, I spoke of the *course* of Mr. Bates breeding, not of the exceptions in the use of bulls. Dr. M. dwells on the exceptions, although I was abundantly protected by the use of the word "mainly," from the criticism he makes on my remarks. When my article of 1845 was written, the fifth volume

of the Herd Book only was published, and my remarks applied to Mr. Bates' breeding as shown in that volume; for I knew nothing of it but as shown in the five volumes of the Herd Book; and at that time, my remark was true, for then he was using only the bulls which united the Princess and Duchess blood, and Cleveland Lad. Dr. Martin says, "it will be seen by Mr. Bates' catalogue of sale, that he had used the descendants of his Matchem cow very extensively." All very true, in 1850, but not in 1842, the period back to which my remarks applied; for then he had used only Cleveland Lad's blood of that strain, as I said; and he told me that he parted with Cleveland Lad because he did not like his get, and what I saw of them, justified the remark.

His catalogue contains only three animals got by the descendants of Matchem cow up to 1846, and of these, one is so stated by mistake, as she was not got by Cleveland Lad, but by Duke of Northumberland. The animals on the catalogue "extensively" got by bulls of the Matchem-cow strain, *were all*, save two *calved after* the publication of my article, the position of which Dr. M. attempts to invalidate by this "*ex post facto*" testimony. I was, in 1845, right in saying, that *since* 1831, Mr. Bates had used that blood, "a union of the Duchess and Princess tribes, *mainly*, and has resorted to one other only, viz: Cleveland Lad." After July, 1831, he never used Bertram; he killed or sold all his stock got by Gambier, and he had only three animals got by Norfolk; and he never used a bull of his own breeding, that had Norfolk blood in him. I believe Mr. Bates to have been wrong in his judgment as to Norfolk's blood; and know him to have been right as to Bertram's and Gambier's, for they both did him great harm. The animals in his sale which had Norfolk's blood in them, *were among the best*, while those in the sale which had in them the blood of Bertram, *were immeasurably the worst*; and none had the blood of Gambier.

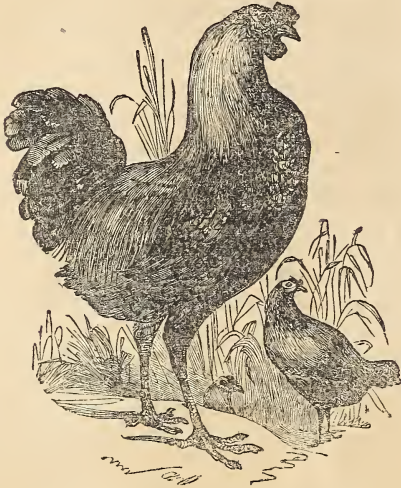
Now, my dear sir, would not the word "mainly" sufficiently cover those exceptions of Mr. Bates' breeding for fifteen years, in which he used Norfolk *thrice*, and Gambier only once, to anything but steer breeders, while all his other breeding was thoroughly, "a union of the Duchess and Princess tribes," and the Cleveland Lad's?

A. STEVENS.

WASH FOR APPLE TREES.—Dissolve two pounds of potash in a pail of water—apply with a brush.

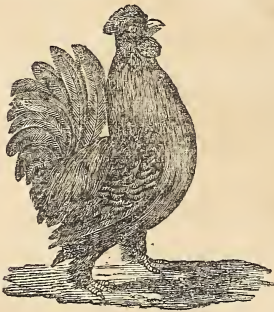
HEN SHOW AND HEN FEVER.

In my letter of last evening, I promised you some further account of the crowing match now holding in the great Boston henroost, where I have spent the day; and now, after retiring to my own room, I will give you my reflections upon it. No opportunity was ever before afforded in America, for so extensive an examination and comparison of varieties, as are here exhibited. The number, as I stated last evening, is



THE GREAT MALAY FOWL.—FIG. 9.

variously estimated from 6,000 to 16,000. The secretary informs me that three fifths of the whole are those overgrown, overpuffed animals known as Shanghae, Chittagong, and Cochinchina birds, and pretty birds they are. Some of the first-named, are the most outlandish, ill-



THE BANTAM FOWL.—FIG. 10.

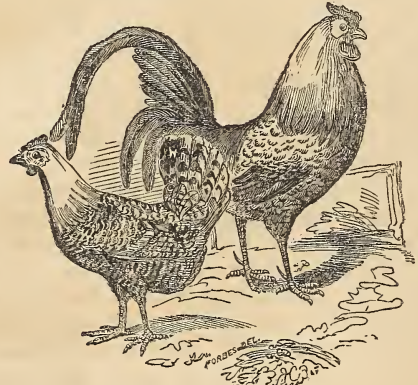
looking, unloveable of all living things I ever saw clothed in feathers—the Ardea minor, sand-hill crane, or turkey buzzard, not excepted. Observing a gentleman whom I recognised as a distinguished friend of all sorts of agricultural improvement, but dead set against humbug, busy with pencil and paper by the side of a

coop which contained one of these feather-legged brutes—about the ugliest specimen in the whole lot, I took the liberty of introducing myself, and peeped over his shoulder while he drew the portrait of a fellow, which looked as though he might have been the paternal ancestor of the original Shanghae family. After hav-



RED SHANGHAE COCK.—FIG. 11.

ing completed the drawing, which had a very life-like Shang-highish appearance, he gave an extra wink with his laughter-loving eye, as much as



BOLTON GREYS.—FIG. 12.

to say "what's a cock without a name," and wrote underneath the sketch, "*First premium Red Shanghae Cock. Weight entire, head, neck, legs, spurs and claws included, 11 lbs. 13 oz. Estimated weight of body, 1 lb. 1½ oz.*"!!!

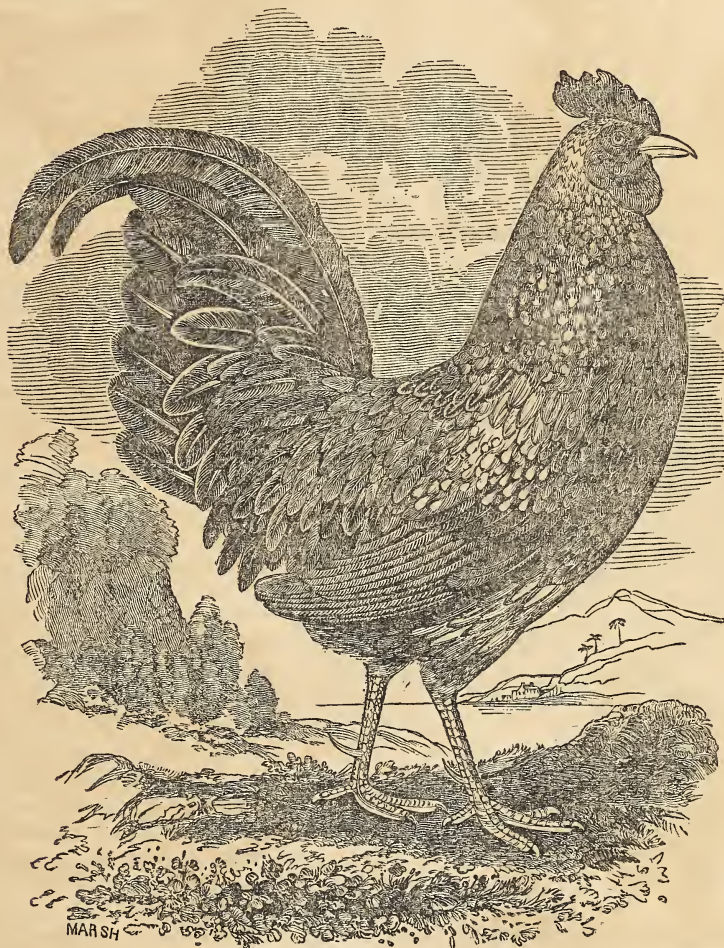
I enclose the sketch, which I hope you will

give your readers, as a *strong* likeness of a red Shanghai cock.

This is the same chap the old farmer objected to yesterday, on account of his ability to stand on the ground and eat corn out of the *garret window*.

Some of the Cochinchina breed might answer pretty well for any person desirous of growing chickens as large as turkeys. I am better pleased with their appearance, than with their taller China neighbors, the Shanghaes.

I should very much prefer. They are great layers, though poor breeders; and therefore, are not particular favorites just now, while the *hen fever* rages so high, and the whole country is converted into one great chicken-hatching machine. Among the prettiest fowls in the show are the Bolton greys. They are about the size of the old style of Dominiques, a few of which are also here; and I should think would be preferred by any man in his senses, instead of that long-legged, garret-window, corn-eating



WILD COCK OF INDIA.

FIG. 13.

According to my notions of chicken beauty, the wild cock of India cannot be excelled.

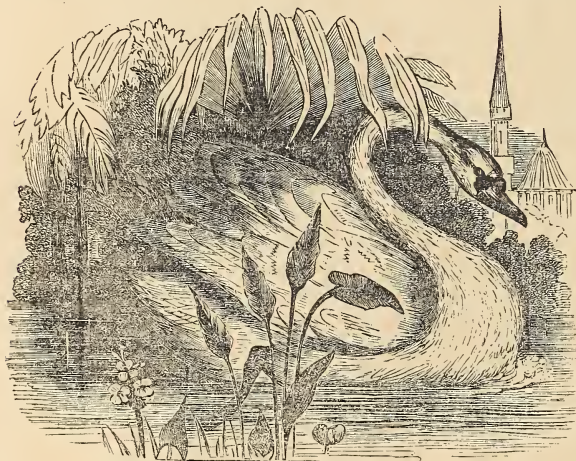
The black Spanish fowls are very noble, military-looking fellows, in their glossy coats, and extremely high, red crests. That, however, is a great objection to them, in a freezing climate. The black Polanders, with their beautiful white top-knots, as large as full-blown roses,

breed, clothed with dirty feathers down to their ugly heels. The Dorkings and Jersey blues are large enough, and good enough to suit any taste not vitiated by this mania of speculation in hen flesh. Among all this vast variety of fancy fowls, with fancy names, my fancy would not lead me to name more than half a dozen kinds from which to select for my-

self, or friends—and these should be Dorkings, Dominiques, Bolton greys, Jersey blues, black Polands, Java game, and perhaps, for fancy, a few Sebright Bantams.

Among the ducks, those which pleased me particularly were called Spanish—their neat, drab coats, closely fitting their moderate-sized, compact bodies. For beauty, the little wood duck excels any other of the *quack* family—those in the rooster trade included.

There were in the exhibition a few very handsome Bremen and China geese, and several small samples of turkeys; but the fever ran highest for the tallest kind of cocks and hens, both in size and price. The curiosity of visitors was about equally divided between the cage of an American eagle, upwards of twenty-three years old, and a pair of very large swans, belonging to the “old Marshfield farmer,” better known among politicians, perhaps, as Daniel Webster.



THE SWAN.—FIG. 13.

The annexed beautiful picture of one of these birds will afford pleasure to your readers, and form an appropriate finis to my hasty account of the great poultry show. SOLON ROBINSON.

Boston, Nov. 14th, 1850.

Although our correspondent is *game*, from crest to spurs, we assure our friends he is not a fighting cock; so they need have no fear of his crowing—he will only flap his wings at some of the humbugs of the henroost.

RICE has been cultivated more than 150 years in South Carolina. It was planted there in the year 1693, and has been grown every year since that time.

ARE YOU PREPARED FOR WINTER.

THIS is an important question which should be attended to annually in the general settlement of accounts by all American farmers, before they eat their new-year's dinner. Among other preparations, they should secure, at least, one good agricultural paper for the long evenings of a cold winter. If they do not, they are not fully prepared. The intellect of that man must indeed be dull, who does not profit by reading works devoted to improvement in his particular calling; but more dull is that intellect which neglects or refuses to put itself in the way of such reading. It is not he who works the hardest, with toil and sweat, that performs the most useful labor; but he who works with the skill of science which he has obtained by study, that enables him to use his strength to the greatest advantage.

If you have prepared yourself for winter, you certainly have provided a good stock of books, and papers, in which you can study the sciences of agriculture, horticulture, arboriculture, and that much neglected science, the art and mystery of growing good fruit, as the time of planting trees is rapidly approaching.

LARGE CATTLE IN KENTUCKY.

I SEND you the weight of Mr. Innes' lot of cattle (spoken of in my letter, p. 59). They were four and five-year-olds last spring, about sixteen of them thorough bred; the remainder, from half to thirty-one thirty-seconds; their colors, roan, white, and red and white. As a lot, they are remarkably fine, and their weight is owing to great ripeness of their points. The winter before they were two-year-olds, they were corn-fed from February until April, grazed until next January, when they were fed until April, grazed until November, from which time they were fed until grass, and fed again during the winters of 1849 and '50. On the 30th of October, I saw them weighed, as follows:—

No.	lbs.	No.	lbs.	No.	lbs.	No.	lbs.	No.	lbs.
1	2,749	9	2,375	17	2,250	25	1,990	33	2,180
2	2,710	10	2,435	18	2,333	26	2,140	34	2,000
3	2,625	11	2,390	19	2,245	27	2,150	35	2,100
4	2,450	12	2,350	20	2,235	28	2,182	36	2,180
5	2,440	13	2,335	21	2,330	29	2,230	37	2,135
6	2,480	14	2,300	22	2,390	30	2,150	38	2,130
7	2,790	15	2,300	23	2,275	31	2,045	39	2,000
8	2,470	16	2,275	24	2,005	32	2,050		

JAMES G. KINNAIRD.

Solitude, Fayette Co., Nov., 1850.

CATTLE SHOWS AND FAIRS IN KENTUCKY.

AGREEABLY to promise, I write you in relation to the fairs and stock of Kentucky. After attending your great fair at Albany, I felt more interested than ever in the cause of agriculture and fine stock. Never had I seen so great a collection of manufactured articles, nor so large a number, and so great a variety of stock brought together. On account of facilities for travel and transportation, your fairs are upon a much larger scale, and much more numerous attended than ours. Besides being encouraged to some extent by your state—a policy which every state in the Union should adopt—a much larger number of premiums are offered than by our societies. The two societies in Kentucky are sustained entirely by individual contributions or annual memberships, confined to a few counties in the garden of Kentucky. It is an error too prevalent that only the wealthy farmers, or those who have fine stock, are interested in sustaining societies for the protection of agricultural and mechanical interests. A more correct and enlightened sentiment is gaining ground; and I hope that ere long, the great majority of all the industrial callings will see the importance of such societies.

The Bourbon-county Agricultural Society held its annual fair near Paris, on the 24th, 25th, 26th, and 27th of September. This is the only society in the state which was kept up during the great pressure in money matters—fine stock, and agricultural produce of every description, having fallen so low, that the other societies throughout the state were dissolved. I cannot speak in terms of too high praise of the spirit, enterprise, and liberality of the people of Bourbon. They have been well repaid by the improvement in their stock, &c. A few years since, they purchased a beautiful lot of ground, which they occupy for holding their fairs. The interest in their exhibitions had annually increased, and a great crowd of persons were in attendance. The first day was devoted to the exhibition of domestic manufactures, implements, &c., and is called the "ladies' day," from the fact of the ladies being more directly interested, and a larger number of the fair sex attending on that day. The ladies of Bourbon have become celebrated for their industry, skill, and taste; and this reputation acquired justly, by previous exhibitions of their handiwork was well sustained at this last. Their interest was not confined alone to this day; the ladies of Kentucky are great admirers of fine animals, a fact attested by the presence of sev-

eral thousand during the days set apart for the exhibition of stock. An amateur band by their fine music added much to the occasion.

The second day was set apart for the exhibition of cattle; the third for horses, and the fourth for Jack and mule stock. An amphitheatre, formed by terracing around a hollow, and capable of seating several thousand, was well filled during the whole exhibition. The stock of the same classes were brought together in a circular ring, for comparison by the judges, while those seated around had a full view. The decision of the judges is publicly announced as soon as made. The exhibition of all kinds of stock was fine. The number of cattle was larger than usual, and as regards a combination of form, quality, and size, equaled any exhibition I had ever seen. The ring of aged cows, twenty in number, would be hard to beat. The premium cow, owned by myself, weighed 1,824 pounds, having suckled a fine hearty calf since the first of March. We are not in the habit of weighing our breeding stock, but I weighed this animal from curiosity. The exhibition of fat cattle, from an aged bullock, four years old and upwards, to a yearling, I do not think the Union could beat. But I will send you a list of the awards, from which you will learn the number of stock exhibited.

The first fair of the Kentucky Agricultural and Mechanic Association was held upon their grounds near Lexington, on the 1st, 2d, 3d, 4th, and 5th days of October. This society was organised last spring, and purchased a lot of ground containing about 25 acres, at a cost of \$5,000, erected buildings costing about \$3,000, and offered premiums to the value of about \$1,200. This amount was raised entirely by individual contributions, without one dollar from the state. I mention this fact, as it might be inferred from the title of our association, that it was encouraged by the state. I wish that the able address of L. F. Allen, before the New-York State Society, could be placed in the hands of every farmer in Kentucky; then, perhaps, the attention of our legislature would be turned to the encouragement of agriculture by a pittance of the public revenue, and the establishment of a board of agriculture. I hope yet, Kentucky will imitate the enlightened example of New York and other states, her population being emphatically an agricultural one. But to the fair, which was similarly conducted to the one in Bourbon.

The first day drew together the largest crowd I ever saw at a Kentucky fair. The extent,

variety, and quality of the manufactured articles reflected much credit upon their exhibitors, especially upon the ladies, and led us to expect much at future fairs. Too much credit cannot be awarded to the ladies of Kentucky, for the interest they feel, and the influence they exert in behalf of our fairs. On the second day, the products of the field, flower and vegetable gardens, orchard, and dairy were brought together. This is a new feature in our exhibitions, and excited much interest. Notwithstanding the lateness of the season, the display was fine, especially of apples, peaches, and grapes, of which several varieties, grown under glass by Mr. H. T. Duncan, near Lexington, attracted much notice. After the award of the premiums, the fruits and flowers were disposed of at auction, at very fair prices, the proceeds going into the treasury of the society.

On the third day, cattle, sheep, and hogs were brought upon the grounds for exhibition and competition, and together, formed a splendid display. Of cattle, none were exhibited but shorthorns. You may remember a conversation between ourselves at the Albany fair, in which you expressed an opinion that Kentucky breeders had not paid sufficient attention to *quality*, and therefore that our stock were deficient in that important essential of a fine animal. I thought of this during the exhibition, and wished that you were present. I think that you would have acknowledged your mistake. Our judges paid due attention to handling. [We are very glad to hear this.—Eds.] The animals of the same class were led into an ample elliptical enclosure, (around which seats were arranged for spectators, a large portion of whom were ladies,) and compared, side by side, the awards being proclaimed by the marshal. The competition, in many instances, was close; and many of the animals exhibited, I believe, would be considered fine, even in old England. [We fully believe this, judging from what we have seen of Kentucky stock.—Eds.] A two-year-old bull, owned by Mr. C. W. Innes, which took the premium at both fairs, of fine form and quality, weighed 1,763 pounds. The show of bulls throughout was most excellent. The premium sucking calf, bred by Mr. George M. Bedford, of Bourbon, sold for \$150. The cows and heifers would compare with any I ever saw. The fat cattle exhibited, were very fine. The premium and certificate bullocks classed as aged, owned and fed by Mr. Charles W. Innes, of Fayette, who also received the premium in Bourbon, weighed 2,740 and 2,710 pounds.

This gentleman has thirty-nine fat cattle, which, as a lot, taking into consideration finish, quality, fat, and size, cannot, I think, be beaten. With his permission, I send their weights. The premium three-year-old bullock, owned and bred by myself, a thorough bred, by Goldfinder, (2,066,) weighed 2,250 pounds. The premium two-year-old bullock, at Paris and Lexington, owned by Mr. T. Hughes, of Fayette, weighed 2,074 pounds, an extra weight for his age. I may here remark, that these weights are owing more to fine fattening quality, and not to size and coarseness of form. Kentuckians have learned that stock of the latter description are not profitable. Of sheep, there were the Cotswold, Leicester, New-Oxfordshire, Southdown, Saxon and Merino. The four former were classed as sheep for mutton; the two latter, for wool, the classification which I hope will be changed, and a similar one to that of the New-York Society, be adopted—"long, middle and fine wool." A lot of Cotswold wethers, bred and fed by Mr. James S. Matson, of Bourbon, would have weighed 250 pounds, or upwards, each. Of hogs, the Berkshire, Irish, and crosses of the improved breeds were shown. Not so much attention as formerly is paid to the breeding of swine, though a pretty good stock of hogs are kept in this part of Kentucky.

On the fourth day, horse, Jack and mule stock were exhibited; and good judges, who had witnessed many exhibitions, pronounced this superior to any they had ever seen, both as regarded the number and quality. There was the horse of fine blood and finish; the showy, well-formed harness horse; the fine-moving saddle horse; and the heavy-set, powerful draught horse. The competition on Jack stock was very spirited, most of the finest animals in Kentucky being brought together. Mules of extraordinary size were shown. This is considered the most profitable kind of stock, and numbers are bred for the southern market. A neighbor has a large lot of colts which cost, at weaning, \$50 per head. The same person sold a lot of yearlings for \$80.

The fifth and last day was set apart for the exhibition of professional manufacturers' implements, &c. The number of articles was not very large, but were very creditable to their makers. Our whole fair went off finely, to the gratification of the members of the association, who indulge in the hopes of the long prosperity and usefulness of the Kentucky Agricultural and Mechanical Association.

The prices of fine stock have not materially

changed here. There have been several herds sold this fall, more perhaps than immediate public demand justifies. Fine cows sold from \$75 to \$100 and upwards. At private sales, double these prices could be had for fine animals. The farmers of this section of Kentucky are becoming sensible of the importance and profit of stocking their high-priced lands with improved animals. Within the last few years, since Durhams have been selling so low, a great change has been made in the stock of the country, large proportions of the cattle now fed for market being mixed bloods.

JAMES G. KINNAIRD.

Solitude, Fayette Co., Ky., Nov., 1850.

REVIEW OF THE JANUARY NUMBER OF THE AGRICULTURIST.

WHEN I look back over the long voyage we have made together, I am surprised to see by the log book, how few squalls we have met with. Whether it is because the "Old Captain" is so popular with the passengers, or whether he is not worth squalling at, I am unable to determine. No matter which, so long as I possess the power of contributing so much to your pleasures as to keep all fair below decks. Now let all hands stick by the ship to the end of another annual voyage; trusting that the old steward will cater well for the ship's table, and that the captain will bring the ship safe to a good port again next December. And now, as the voyage is likely to be a pleasant and profitable one, let us urge our friends, far and near, to embark with us; it will only cost a dollar for a whole year. What a cheap passage! Who that has perused a single number of this paper with care, will say that he has not received a dollar's worth of valuable information? Who will tell me that all my labor to instruct and arouse the readers of the *Agriculturist*, have been thrown away, or fallen like the seed of a thriftless husbandman upon barren ground? If I could be convinced of that, I would write no more; until I am, I shall continue my course.

Professor Johnston's Notes on American Agriculture.—Is it possible that a man of so much celebrity could have written so carelessly as these extracts indicate? Yet, I do not know why I should doubt; for I have often observed that the English lions in literature, who visit this country, are not very remarkable for their chaste style, nor truthful descriptions. I am glad you have taken the matter in hand of reviewing these notes, and that you are doing it in such an unexceptionable manner. Shall we have the subject continued? [Reviewer will

find a continuation in this and the succeeding numbers.—Eds.]

Bad Farming.—These are not the only instances of bad farming in this country. Your correspondent, who sends you his occasional "Rough Notes by the Way," mentioned in the December number, a specimen of bad farming which he saw, that deserves the severest reprehension. So long as the careless slovens among farmers are permitted to raise whole fields of weeds and thistles, to seed their neighbors' farms, as well as their own, and so long as our broad roadsides are kept by law, as nurseries of everything pernicious to cultivation, how can the owner of the adjoining land make a show of good farming? I look upon the waste lands along our public highways and railroads as about the worst specimens of bad farming in America. It is a pity that we have not more travellers taking notes and pointing out our bad farming; for no one will be likely to correct his faults until he sees them. Planting corn before plowing the ground is not worse farming than planting grass and never plowing it afterwards. I have my eye upon a field of as good tillable land as there is in the state, which has been in grass, (so says the owner,) for fifty years. No argument will convince him that he is guilty of bad farming, notwithstanding he expends almost as much manure every year on the grass crop as it is worth. So talk to him about rotation of crops, and the advantage of breaking up that grass sod, and rotting it to make a crop of corn. You might as well talk to him about breaking up his own heart, and planting it with potatoes. "Sir," says he, "that land was laid down to grass by my grandfather, in the year '98; it has been mowed every year since, and while I live, that smooth green sward shall never be broken. Breaking up old meadows is just on a par with your subsoil plowing, as you call it, and some other new-fangled notions, that my son is 'tarnally reading about, in that paper of yours from York." Another instance of bad farming, of which so many are guilty, is keeping about a quarter more stock than can be well kept in summer or winter. When summer feed is scarce, the cattle get over the fence into mischief. When winter feed is scarce, the mischief gets into the cattle, and their hides get over, or on the fence, in the spring.

Economy in Human Food.—The very reason that "many persons are unaware of the great difference of nutritious matter contained in different articles of food in daily use," should be a

sufficient reason with you to furnish them that information in a succession of articles like the present. Besides information concerning the economy of human food, let us be told what is the most digestible in the human stomach; for, after all, no matter what the food costs, that is the most economical, which has the best effect upon the economy of human life.

Raising Geese.—"A goose is more easily raised than any other domestic bird of our experience." Exactly; but a greater goose is he who raises them; and a still greater one is either he or she, who sleeps upon their feathers.

Economy of Using Mules.—"It is still a mooted question"—yes, and always will be. However, let us have the arguments. Only don't get mulish about it, gentlemen.

Steam Plowing.—Every inventor, or rather every blundering fellow, who has attempted steam plowing, must have had the safety valve of common sense hermetically sealed in his infancy; for amidst all the smoke and fog with which the world has been darkened, there has scarcely been a gleam of light scintillating from the brain of all the authors of these wonderful inventions which were about to astonish the world, break up the plow makers, and turn the horses out to grass. The reason is pointed out in this article. Steam cannot be applied to plowing—it may be to digging.

A Day in Westchester County.—I am vexed with you, Mr. R., to think you should find time to spend so many days here and there, and come so near without even giving me a call. Mary says: "It is too bad, don't you think so father, after so many promises, and when we want to see him so much?" Come and make us a visit, my dear sir, and I will give you a ride over the hills, and through the crooked lanes, among the stone walls and old orchards, and gambrel-roofed houses, and *talk dog* to you; and if you will convince me that the least suspicion of sheep killing rests upon the reputation of Old Bose, overboard he goes, without the least hesitation, with a twenty-pound shot tied to his neck. It is truly surprising to think the owners of these fine old hills, fit only for pasturage, are deprived of half their value annually, on account of a horde of miserable curs, more worthless than any other worthless dogs—the owners always excepted.

Stealing Fruit.—This statement which astonished you so much, does not surprise me in the least. Even here, we occasionally feel the effects of the same intolerable system of pilfer-

ing, which is second only to the dog nuisance. There is but one way to put a stop to both. Authorise every person who is trespassed upon, to flog in one case, and kill in the other—not much matter which—and sheep killing and fruit stealing, in the vicinity of New York, will cease to be an every-day occurrence.

Coloring Green Tea.—None but the outside barbarians you speak of, who are already, by nature or education, colored that verdant hue, would buy such tea; so it is of no consequence how much indigo and gypsum they swallow, under the impression that they are taking tea.

Ladies' Department.—The valuable recipes upon this page every month are worth more than you charge for the whole volume. It is surprising where you pick up so many.

Foreign Agricultural News.—This is another page that is always interesting. How advantageous it would be to all of us to read a little more of what our neighbors are doing in the way of scientific improvement of their lands.

Trimming Box Borders with a Scythe.—Why has not this been thought of before? How many just such simple little things like this we might learn every day, if we would only look around among our neighbors with an observing eye. What a volume of truth in the remark of Mr. Hope—"if we expect to be made wise by hearing the opinions of others, we should also be willing to communicate our own opinions." If we do not thus communicate, how can we expect to have our errors corrected? If we do not tell our own practices, how can we ask others to tell us theirs? If we tell nothing, one to another, what a stupidly ignorant set of mortals we could make ourselves appear. Most unfortunately, this is the very character of a majority of American farmers. They are like the lilies of the valley—they toil, but they read not, neither do they think. You need not fear that these remarks will offend them. They will never see them. It is only twenty thousand out of twenty millions of those who are directly interested in the improved cultivation of the soil, who ever read the *Agriculturist*, and therefore none of that class, who never think, will take offence at what may be said by your

REVIEWER.

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EFFECTS OF IRRIGATION.—Water, applied to the soil by irrigation gives many other things besides humidity; it manures, consolidates, deepens the staple, or surface mold, and guards against cold—effects as obvious in a northern, as in a southern climate.

SALT FOR CATTLE AND SHEEP.

In the preface to an article under this title in your last number, you invite arguments in opposition to the doctrine therein advanced. I do not wish to present any argument against the practice; but I will give some facts which may go for what they are worth, to prove that salt is no more necessary to the brute creation, than spirituous liquor is to the human portion.

During one of the winters of my residence upon the western prairies, salt became very scarce and difficult to obtain, even at \$10 or \$12 a barrel, the price it was universally held at; and many persons who had always considered it as an article of positive necessity for cattle and sheep, were obliged to dispense with the use of it for several months. One acquaintance of mine, who is a very observing man, found his cattle required much less water than in any previous winter, and actually kept in better condition with the same feed, than during the seasons they had all the salt they desired. He came to the conclusion that cattle, when fed with an abundant supply of salt, in winter, are inclined to drink more cold water than is beneficial to their health. His cattle never wintered better than they did that year, nor were more free from disease.

During several summers, I have had cattle running upon the prairie, that never tasted salt from the time they left winter quarters in the spring, until brought up again in the fall; and I never have been able to see the least difference between such, and those that had all they desired every day through the season. Certainly, better beef never was eaten than I have butchered, entirely grass fed, without salt.

I had always been very careful to salt my sheep just as much as they would eat, and considered it quite necessary to their health, until it so happened, one summer, that the biggest part of the common flock came to be owned by my neighbors, who thought as my sheep always got plenty of salt, it would be no more than neighborly to let theirs eat with them. But I thought proper to let the whole lot try the experiment of a long feed upon fresh grass, and I certainly never have had a more healthy flock than I did that year. There are several other observations I made, which have inclined me to the opinion that cattle and sheep can do without salt, just as well as wild deer, goats, and buffaloes; that the taste for salt which all animals manifest, is like some of the apparent natural tastes of numbers of the human family—more artificial than natural—more acquired than necessary.

It is a fact worthy of notice, that the Rocky-Mountain hunters who had been used to the stimulant of salt all their previous lives, and looked upon it as an actual necessary, instead of a luxury, have not only learned to do without it, but actually grow fat and enjoy better health than they did in civilised life. It is, therefore, a mooted question, whether salt is at all necessary for man or beast.

SOLON ROBINSON.

ENGLISH RAY GRASS AND ITALIAN RYE GRASS.

I SEND you a specimen of rye-grass seed raised from seed purchased of you. It is a mixture of English and Italian. I have caused to be planted some twenty-five acres mixed with clover. The Italian comes forward rapidly, growing seed the first season. The English does not yield seed until the second year. The English I prefer for lawns, and to mix with other grasses. It is a beautiful grass, of a dark-green, and very glossy, and I presume will remain here, as in England, for years, without running out. The Italian is of a much lighter green, although a coarse grass, and will run out in two to three years. It yields a much greater burden of grass, per acre, than the English. On very rich land, two heavy mowings a season may be made. Both make excellent hay for horses or horned cattle; but if severely pastured, the stock are so fond of it, that they will continue to eat it very late in the season, and are apt to pull it up by the roots.

Both bear the winter better than most of our other hay grasses, and continue green till very late in the year. At this time, while I write, I am surrounded with it, as green as in the summer; and seed planted twenty-five days since, is now up and growing uninjured by several severe frosts, which have been upon it. Some of the crop of seed sent you, was planted about the 10th of August, with turnips, and the ground is now covered with a mat of it, six to eight inches long. This is in clayey land, and rather wet at this time.

I also deem it one of the most valuable of grasses; and when we shall properly understand it, I think no farmer will be without it upon his land. The Italian is extensively used for soiling, in Europe, and I take the liberty of sending you an extract from the speech of the Earl of Erne, at Lisnaskeigh, in Ireland, to his tenantry, in September last. Speaking of the use of tanks for liquid manures, which, by-the-bye, he very highly recommended, he says: "You will hardly believe me when I tell you that I saw upon Mr. Kennedy's farm, in Ayrshire, Scotland, land which produced five good

cuttings of Italian rye grass, amounting, in weight, to between 30 to 40 tons per Scotch acre, [our readers will bear in mind that the grass was weighed wet; perhaps it would not have been over five tons dry. A Scotch acre is equal to about $1\frac{1}{4}$ acres English.—Eps.], enabling him to keep six cows to the acre, by house feeding; also, 20 sheep to the Scotch acre. But you should have large tanks to keep the liquid manure in until it decomposes and ferments." I would ask, why cannot we, too, do it?

CHARLES R. ALSOP.

Middletown, Conn., Nov., 1850.

A JAUNT IN OHIO.—No. 1.

On the last day of September, 1850, I landed from on board steamboat, at Sandusky city, favorably located on the bay of that name, near the southwest end of Lake Erie, and the terminus of the Lake-Erie and Cincinnati Railroad. It was thirty years since I had last seen the place. Thirty-two years ago, I knew it with a single log cabin and a framed warehouse, on the margin of the water, built there for the purpose of receiving the casual goods which arrived at that early day from Albany, via the Mohawk River, Wood Creek, Oswego, Niagara, and Lake Erie, before the construction of the Erie Canal.

Sandusky was then "O'Gont's Place," so called, after an old French trapper, who so-journed a part of his obscure life at that pleasant spot. It was a wild, lonely yet cheerful place in 1818; a few scattered brushwood, patches of wild grass, an oak opening, spots of bare lime rock now and then cropping out, a spring or two of water gushing out of the rocky bank next the bay, where I have often slaked my boyish thirst, after a weary travel among the woods which separated me from my log cabin, a few miles distant. A fine stretch of bay to the left, some twenty miles inland, parallel to the lake, a glimpse of Lake Erie, blue and boundless to the right, with a point of Cunningham's (now Kelley's) Island, shutting off a part, the peninsula in front, woods in the back ground; and that comprised the scenery of the now city of Sandusky, then, on paper. I found it altered only by the clearing of a portion of the forest, and the erection of a thriving, well-built town of 4,000 inhabitants, the terminus of two railroads, and teeming with the promise of a great, commercial city in future.

Taking the morning train of cars for Cincinnati, we passed rapidly into the interior, and on the route of the road, a flat, monotonous, and

painfully-straight course, leaving the farms and villages, principally, either out of sight, or so far distant, as to hardly be recognised; yet, sufficiently distinct to show that it is a fine agricultural country, prolific in corn, wheat, and grass; yet rather slovenly cultivated, with an occasional exception, and passing many a field of limestone opening, which I was informed had harvested thirty to fifty bushels of wheat to the acre the past season, an uncommonly bounteous one, even for this region. The corn looked slovenly; yet it had a good growth, but full of weeds, which I learned was caused by an uncommonly wet weeding season, preventing in many cases, the usual cultivation. The fruit trees were luxuriant, wild in too many cases, for want of pruning, and the apples hung in ropes and clusters on the trees, and covered the ground beneath. But few of them appeared to be grafted. The peach trees were exceedingly thrifty and luxuriant—the fruit mostly ripened and grown, and no disease cankering nor infesting leaf, bark, nor root. The people literally lived like "pigs in clover."

With the exception of the wood and water stations, an occasional small freighting depôt, with a post office and a few surrounding buildings in a fertile country of oak openings and prairie and forest mixed, the only town for the first forty miles, is Tiffin, the county seat for Seneca. Tiffin is a smart town on the east bank of the Sandusky River, well built and thriving. The country about here was chiefly forest, in its original state. There are now many farms along the road, which still maintains its everlasting, straight, monotonous course, occasionally passing a new and uninteresting village, until it reaches Belle Fountaine, the county seat of Logan, a stirring town of a thousand or fifteen hundred people, and a point of transit for much farm produce and merchandise. A few miles further on, is West Liberty, where the road first strikes the valley of Mad River, one of the richest and most fertile, agriculturally, in the state. Here opens a fine farming country with broad cultivation, great crops of corn and wheat, and a commencing show of the fertility and abundance of Ohio. The farms have long been cleared, the buildings generally good, have a neat and tidy appearance, great fields spreading out on all sides; and although but few of them immediately on the road, yet showing grandly on either side, in its immediate vicinity. Occasional herds of well-bred cattle were seen in the pastures; the corn was mostly cut up and neatly shocked, while

many of the fields where it stood, were some in wheat, which was well up and promising.

Next comes Urbana, of which more hereafter. Passing rapidly through the same broad, fertile, and interesting country, along the Mad-River district a mile or two, the expansive bottoms of which, in many instances, lay unproductive for want of slight ditching—a most lamentable neglect, and a vast waste of capital—we reached Springfield, the court and market town of Clark county, one of the best and richest farming counties in the state. This is a fine town of perhaps 4,000 people, well built, with a show of considerable wealth, enterprise, and business. It lies on the Buck Creek, a beautiful, clear stream, running over a bed of clean limestone gravel, which last material is largely intermixed with the soil, and imparts to it its great fertility. In the neighborhood of this town, is a Lutheran college, with handsome buildings and grounds, in a flourishing condition; and many grand farms, with good and tasteful buildings—a delightful neighborhood, if I may judge from its appearance. The chief fruit along this valley is the apple, which abounds in great luxuriance. The peach grows well, but is only a casual crop, being on an average of full two years in three, cut off by the spring frosts. But the Catawba grape grows well, and is considerably cultivated as a table fruit, and is attracting attention for the manufacture of wine, for which it is admirably adapted, making a grateful hock-like beverage.

A few miles further on, are Yellow Springs, the chief watering place for this region. The springs possess valuable medicinal qualities, and are much resorted to in the summer, by invalids and pleasure seekers. Here are well-built boarding and bathing houses, and hotels, and the attractive residence, also, of William Neff, Esq., the chief proprietor of the place; who, among his other pursuits, has been for many years engaged in breeding fine herds of shorthorn cattle. He lived many years in Cincinnati, where he was an extensive merchant, but now resides mostly at his country house in this village. His cattle are at present, chiefly in Illinois, where, in connection with his son, he is farming largely in grazing and breeding stock. In this neighborhood, I saw long lines of Osage-orange hedge, which grows well. It had a beautiful appearance, and, with abundant clipping and care, may make a substantial enclosure. Here the railroad strikes the valley of the Little Miami, a narrow and fertile, yet not over-interesting stretch of country, lying along a lazy, puddly stream, with every now and then

a low, shiftless-looking mill dam, which turned its listless waters into quite as lazy a running grist or saw mill; with here and there a carding machine and fulling works, by way of variety; and a "still" every few miles, with a long row of pig pens cunningly constructed along a shelving bank, to enrich the drinking waters of the good people of Cincinnati and New Orleans, and relieve the proprietors from the labor of carting the manure to the waiting corn fields adjoining. A precious piece of economy in agriculture!

Soon after striking this valley, and before the above remarks will generally apply, lies the fine and thriving town of Xenia, the capital of Green county. Here the Columbus Railroad intersects the Cincinnati and Sandusky line, and joins it to the Ohio River. Xenia is the chief point of storage for the produce of this region, both for the lake and river markets; and large quantities of merchandise are here distributed for the neighboring country, a business town, of perhaps 2,500 inhabitants. Hence, down, the railroad is altogether confined to the immediate river bottoms, away from the country roads, and the best farming neighborhoods. There are, however, occasional fine farms stretching down to the river, with broad fields and excellent crops of corn, meadows, and pastures. There are magnificent woods of grand old trees, throwing their stately branches and tops over the lazy water, and interspersed along the banks and hill sides, with the low and beautiful pawpaw, its graceful yellow leaves, lighting the deep green of the forest, with a cheering brilliancy. Little villages, freight and passenger stations, wood and watering places for the locomotives, occur every few miles along the valley; and further down, the bottoms widen and the corn fields grow larger, and the buildings stand thicker, until the still broader valley of the Ohio opens upon the view, flanked in the distance by the Kentucky hills; and at once, you emerge into the deep gorge of the Ohio, and wind your way down some five or six miles through motley congregations of small farmeries, cabbage gardens, boat yards, furnaces, &c. Next to the river and on the hill sides close by, an occasional vineyard or orchard; getting more and more into the dirt and smoke, and bustle of the great trading and manufacturing mart of the Ohio, till you bring up at a most cramped, inconvenient, and awkwardly arranged depôt, surrounded by furnaces, coal yards, water works, boat yards, and noisome smells, in the upper end of the city of Cincinnati.

Here, perhaps, I had better stop, as I have

already given you an account of the cattle show held here for 1850 [see last December number of the *Agriculturist*, page 374]; but I found so much that was new to me, and although amidst some unpleasant surroundings, in a small way, so much that was agreeable, in the enterprise, industry, and thrift of the people with whom I became acquainted in my short sojourn in the city, that I venture to give a short note or two of what I saw in and about this large populace, and in some parts, exceedingly dirty town.

A VISITOR.

EXPERIMENT WITH CORN—DEEP PLOWING AND GREEN CROPS.

The ground upon which the experiment was made was as near alike, and prepared as near alike as could be. The corn was planted the 4th of May, three by five feet. That which was plowed, was plowed the widest way only. Four rows were plowed exclusively with the coulter, from eight to ten inches deep. Plowing repeated four times, at suitable intervals. The next four rows were cultivated entirely with the hoe. The balance was plowed as is usual here; first throwing the earth from, and then to the corn, and plowing four times. All was kept clean throughout the season. Two rows of that cultivated as usual, when gathered, weighed 42 pounds. The next two, hoed corn, weighed 43½ pounds. The two other rows of hoed corn weighed 43 pounds. Two rows of coultured corn, side by side with the preceding, and having the same number of hills and ears of corn, weighed 45½ pounds. The hoed corn was nearly prostrated twice by wind and rain. I had to set up the greater part of it, just before and just after it tasseled. The coultured corn suffered hardly half so much as the hoed. The residue suffered comparatively little. These are the facts. Deductions are for you and your readers. The quantity raised on the ground is of no consequence.

I conducted various other experiments with corn, but do not deem them of sufficient interest to burden your columns, nor bore your readers with them. These little things are interesting to me, however, and I always have some such under headway.

I bookfarmed that famous bottom I spoke to you about, and made a fair crop of corn. Last year, it took sixty of the largest ears to shell a bushel; this year, forty-eight do it. This book-farming makes me the subject of great ridicule and merriment. For instance, you advised us, last spring, to plow deep and pulverise well. I did so, but was laughed at therefor. You ad-

vised the sowing of corn broadcast. I sowed something like four acres. This threw a great many neighboring diaphragms into convulsions, and cackinations were rife and boisterous there at. So well am I pleased, however, that I shall give them an opportunity to split the larynx outright another year. The quantity of fodder produced was enormous, besides a *pretty considerable sprinkling of corn*. You apprised us that it might be well to sow rye for early grazing, soiling, &c., next spring, and I have done so. It is *too green* to laugh at now. You instructed us to sow twelve quarts of Timothy seed per acre. I did it. and if they do laugh at that, it is mighty green. [Fearing that some of our readers may not understand the full meaning of the word "green" as here used by our correspondent, we explain, that the Timothy and rye sowed by him, agreeably to our directions, have already covered the land with a thick *green* herbage, and give promise of uncommonly large crops of hay and grain.—Eds.]

To renovate land, you inculcate turning in green crops. I capsised all my clover—masticators displayed themselves of great length and breadth. Of all the green things, the wheat on that clover land is the greenest; and rather too green to laugh at. The land having been put in order by plowing, harrowing, and crushing, the wheat was plowed in about three inches the first of September, and I harrowed it the first of October. It looks very well.

U. B. OGLESBY.

Boonville, Mo., Dec., 1850.

AN IMPROVED SHEEP HOPPLE.—The only difference between this and the ordinary wooden hopple, consists in having the bar project forward of the fore foot about ten inches and pointed. In attempting to climb a stone wall, this will catch and throw the sheep back. A Mr. Odell of Westchester county, says this is the only way he can keep some unruly wethers within his enclosures. When sheep are hoppled, whether with a wooden bar or strap, they should be often examined to see the leather does not cut the leg, and so make necessary restraint a cruel torture.

TO PREPARE ANCHOVIES.—To a peck of sprats, add two pounds of salt, one pound of saltpetre, two ounces of prunella, three ounces of Bay salt, a few grains of cochineal, well pounded together in a mortar. Pack down a layer of sprats, and sprinkle on the mixture, and then the sprats again, and so on; press hard and cover close for six months.

Ladies' Department.

CHEAP LUXURIES.

SUNSHINE and showers, which beautify all nature, may be enjoyed by nearly all for nothing. An invigorating scene at sunrise or the gorgeous American sunset are equally cheap. In winter, the luxury of a few house plants may be enjoyed for a trifling expense. "A flower in your window sweetens the air, makes your room look graceful, gives the sun's light a new charm, rejoices your eye, and links you to nature and beauty. You really cannot be altogether alone, if you have a sweet flower to look upon, and it is a companion which will never utter a cross thing to anybody, but always look beautiful and smiling. Do not despise it because it is cheap and everybody may have the luxury as well as you. Common things are cheap, and common things are invariably the most valuable. Could we only have a fresh air or sunshine by purchase, what luxuries these would be; but they are free to all, and we think not of their blessings. There is, indeed, much in nature that we do not yet half enjoy, because we shut our avenues of sensation and of feeling." In summer, a rose bush under your window, or a honeysuckle climbing over the door, and making the whole house fragrant with their flowers, cost nothing, and yet what a luxury of enjoyment they afford.

FRIED POTATOES.—This good old-fashioned dish, which used to delight us in boyhood, has gone so much out of use, that the following directions for preparing it may not be amiss:—Take good sound potatoes and pare off the skins, and cut them into slices; have a pan of hot lard ready, immerse them in it, and fry them over a brisk fire until a portion of the batch becomes partially crisped; drain off the fat through a colander, and serve them as hot as possible, seasoned with a little salt only. They must be eaten hot, or they are worthless. Sweet potatoes cooked in the same way are delicious.

A FINE HASH.—Take any cold game or poultry that you have—you may mix several kinds together—some sausages, of the best sort, will be an improvement. Chop all together, and mix with it bread crumbs, chopped onions, and the yolks of two or three hard-boiled eggs. Put it into a saucepan with a proportionate piece of butter, rolled in flour. Moisten it both with gravy or warm water, and let it stew gently for half an hour.—*Exchange.*

TO MAKE MAPLE-SUGAR CUSTARD.—Make a crust as for a custard in the ordinary way. Take of maple sugar, one pound; butter, half a pound; milk, one pint; one egg; one nutmeg; and a tablespoonful of flour. Spread the sugar over the crust, and then the butter on top of that; beat up the egg with the nutmeg and milk, which pour over the sugar; dredge or dress on the flour with grated nutmeg, and bake in an oven or stove.

VALUABLE WASHING RECIPE.—Add one gill of alcohol to a gallon of soft soap, and mix intimately. Apply the soap to the clothes in the usual way and let them soak some hours in the suds; then rinse out with very little labor of rubbing. We obtained the above from Mr. Cornish, steward of the Insane Hospital at Hartford, who says there is not an inmate of the establishment but what has reason enough to appreciate its value.

FRYING FRESH FISH.—Never put them into cold fat. Let the lard, butter, or oil be first heated to a degree just short of burning, and then plunge in the fish—the greater the quantity of fat, and the quicker the fish are cooked, the better they will be, as they give off their own fat instead of absorbing that in which they are cooked.

BLOWING OUT A CANDLE.—There is one little fact in domestic economy which is not generally known, but which is useful as saving time, trouble, and temper. If a candle be blown out holding it above you, the wick will not smoulder down, and may, therefore, be easily lighted again; but if blown out downwards, the contrary is the case.—*Exchange.*

TO CLEAN SILKS.—Take a quarter of a pound of soap, a teaspoonful of brandy, and a pint of gin; mix all well together. With a sponge or flannel spread the mixture on each side of the silk without creasing it; wash it in two or three waters and iron it on the wrong side. Thus treated, it will look as well as new.—*Exchange.*

DYSPEPTIC BOARDING HOUSE.—The best board in the world for dyspeptic young ladies, is said to be the wash board. It gives them strength of muscle, an exuberance of spirits, a good appetite for their meals, and supercedes the necessity of painting their faces.

Foreign Agricultural News.

By the arrival of the steamer *Washington*, we have our journals to the 21st of December. The only news of any importance was a slight advance in cotton.

Remedy for the Gripes in Horses.—We need never loose a horse by gripes, provided we administer, when first attacked, 1 oz. each of spirits of nitre and paregoric, in a quart of warm water.

Strength of Vitrified Clay Pipes.—Those of three-inch bore, lately tried at the works at Glasgow, stood the pressure of a column of water 230 ft. high, and those of four-inch, 140 feet, without breaking. These pipes are said to be much cheaper than lead.

Remedy for Cattle Attacked with Disease in the Lungs.—Moderate bleeding, powerful blistering to the sides, with setons in the brisket, and strong sedatives internally.

The Object of Mixing Charcoal Dust with Fresh Urine.—Ammonia is the product of the putrefaction, which soon takes place in the urine; and the propriety of adding charcoal dust to the fresh liquid depends on the advantage of retaining the volatile products of that decay from its earliest stages.

Pigs Affected by Cold.—Fine-bred pigs, having little hair, must have a much warmer temperature than sheep. When pigs huddle together, it is a sure sign that they are not warm enough. Cold, stopping the circulation in the skin, drives the blood to the internal organs, and causes inflammation.

Comparative Cost of Different Kinds of Pipe in England.—Suppose that 1½-inch bore pipe is required, the cost will be about 1s. 10d. per yard, cast-iron jointed; 3s. 3d., glass-jointed; 3s. 3d., gutta-percha; 4s., lead; and 1s. 3d., glazed stoneware pipe, 2 inches diameter, with cemented joints. These prices will vary a little in different localities.

Interesting Physiological Fact.—It is remarkable, as among the millions of other proofs of the wisdom and provident care of the Supreme Being, that in the milk of a female, who has a fractured limb, the lime is reduced in quantity until the fractured bone is again united. The eggs, also, of a fowl, which has a broken limb, are without shells until the broken parts are again united.

Comparative Strength of Water Pipes.—Gutta-percha, where expense is no object, may be used; it will bear a considerable pressure. A ¾-inch bore tube, ⅝ inch thick, has been tested with about 750 feet pressure, without failing. Glass pipes will bear a pressure that is almost incredible. From experiments made at Nailsea, glass tubes 3 feet long, varying from 1½ to 2¼ inches internal diameter, with thicknesses of from ⅙ to ⅜ of an inch, bore pressure of from 1,500 to 3,600 feet.

Manure for Potatoes.—I see in your paper, (quoted from the *Economist* of October 19th,) a method of preparing manure for potatoes, according to which the dung, (stable dung and vegetable compost,) was mixed

with one fourth or one fifth of quicklime. Is not that an excellent way of getting rid of the ammonia, equal to the bleaching system, by exposing it to the sun, wind, and rain?—*Timothy Clod, Forfarshire*. [Yes. But as ammonia is undoubtedly injurious to the potato crop, the object of the writer is, we presume, to do exactly what you described.]—*Gardeners' Chronicle*.

Ancient Farming.—It is stated in an article on this subject, in the July number of the *London Quarterly Review*, that the average product of wheat in the home provinces of Rome, in the time of Varro, was 32 bushels to the acre, far more than the present average in Britain, and probably three times as much as that of the United States.

Experiments on Irish Peat.—When Mr. Owen's experiments upon Irish peat were first introduced in the House of Commons, the subject was treated with ridicule; but lately, extensive operations have been carried on, and an exceedingly profitable field for speculation has been opened. From 36,500 tons of peat, at 2s. per ton, the "Times" states that the following produce has been realised:—365 tons of sulphate of ammonia, at £12 per ton, £4,380; 255 tons of acetate of lime, at £14 per ton, £3,570; 19,000 gallons of naphtha, at 5s. per gallon, £4,750; 109,500 pounds of paraffine, at 1s. per gallon, £5,475; 73,000 gallons volatile oil, at 1s. per gallon, £3,650; 36,000 gallons fixed oil, at 1s. per gallon, £1,800. Making a total of £23,625. The profit, after deducting the expenses of the sulphuric acid used in the manufacture, the wages, labor, cost of sending to market, &c., amounts to £11,908, or more than 100 per cent. upon the outlay.—*Agricultural Gazette*.

Great Agricultural Movement in Growing Flax in England.—A company comprising many of the leading nobility and land owners, is seeking from government a Royal Charter to give encouragement to agriculturists and farmers to bring into immediate cultivation, at least one hundred thousand acres of land, for the production of flax straw; which substance the promoters of the charter have, (by new and peculiar processes never hitherto adopted,) the power to convert into a fit state to hold competition with the best flax imported from foreign nations, without the aid of steeping, kiln-drying, nor mill scutching. The machinery by which the fibre is separated from the stalk, without steeping, is of a very simple and inexpensive kind, requiring no previous knowledge to work it. The unsteeped flax is uniform in strength, and free from stains, so that all after processes of manufacturing and bleaching may be conducted with a facility and exactness not hitherto attainable.—*Ibid*.

Heating by Steam.—This is by no means a modern invention. In 1745, Col. William Cook improved upon a plan of heating hothouses, suggested by Sir Hugh Platt, many years before, and in 1755, we find him recommending it as applicable for the forcing of fruit.—*North-British Agriculturist*.

The wheat crop in Nova Scotia is an entire failure worse than in any former year.

Editors' Table.

MR. A. SHERMAN, our agent, will spend most of the month of February in North Carolina, and the month of March in Southern Virginia and Maryland.

MR. SOLON ROBINSON, our assistant editor and agent, is now in Florida, and can be addressed at Tallahassee, as late as the 20th of February. He will then slowly return north by the way of Savannah, Charleston, Wilmington, Richmond, and Norfolk. He will arrive at the latter place about the 15th of March, and spend the residue of the month and part of April, in Lower Virginia.

BRAZILIAN TEA.—We have received from Dom L. H. F. d'Aguiar, Consul General of Brazil, near New York, several packages of tea, grown in that empire, the quality of two samples of which (Nos. 9 and 16,) in our judgment, are equal, if not superior, to that of China. Other samples, (Nos. 2, 4, and 6,) we suspect, from want of sufficient manipulation, were not so agreeable to the taste. The consul says: "We are trying the cultivation in the empire, and according to the success obtained, it promises to be a new acquisition to the country, as well as a source of wealth; and, should the success be equal to that of the coffee, the day will not be far distant when we shall be able to furnish your country, (the United States,) with two beverages so much in use, both of which have been so useful to the cause of temperance." We congratulate our continental brethren of the southern hemisphere in the successful cultivation of this useful and almost indispensable luxury, and trust that an increased supply will tend to the advancement of the agriculture and commerce of the two countries, and will prove to their mutual advantage.

GREAT SALE OF MILCH COWS.—We desire to call attention to Mr. Bell's advertisement of the sale of cows to take place on the 25th of next March. Mr. B. has been for years selecting and breeding with a direct reference to milking properties, and he has now got together, probably, one of the best herds in this respect, to be found in the country. The sale will be positive, and we trust that all those in want of first-rate family cows, will not fail to attend it. For particulars, as to the breeding of these animals, see advertisement.

SOUTHERN SHEEP HUSBANDRY; by H. S. Randall. Mr. Saxton has purchased the entire edition of this popular book, of the publisher.

STEPHENS' BOOK OF THE FARM.—This valuable work is now offered, complete, by C. M. Saxton, 123 Fulton street, at the reduced price of \$3.50 per copy, with paper covers for mailing, or \$4 neatly bound. Every farmer and every rural library should possess this work. The quantity of valuable information to be had for a small sum is astonishing.

AGENCY AT PITTSBURG, PA.—Mr. Henry McCormick is appointed agent for the Agriculturist at this place. He will also keep on hand a full supply of C. M. Saxton's agricultural books, at the publisher's prices.

THE ECLECTIC MAGAZINE OF FOREIGN LITERATURE, W. H. Bidwell, editor and proprietor, 120 Nassau street. Of all the foreign republications, the Eclectic, in our judgment, is immeasurably superior. The good taste of the editor leaves out all trash and the more local articles, selecting those only which have an immediate interest among us or are of permanent value. It is, therefore, nearly as valuable to bind up at the end of the year, to occupy a place in the library, as to adorn the centre table from month to month. Each number contains 144 pages of large octavo, in double columns, making 1,728 pages a year.

AGRICULTURE IN SWITZERLAND.—Dr. J. V. C. Smith, the editor of the Boston Medical and Surgical Journal, has been travelling in that mountainous region of the world, and in one of his letters, notices some of the agricultural products of localities where the best efforts of the husbandman produce but a poor return in grain or potatoes. Hence the production of crops unknown to American farmers. One of these is poppies, which are grown by thousands of acres; not for opium, but the seed, from which a beautiful transparent oil is produced, which is much used in house painting, and is considered far superior to linseed oil, because it is almost colorless, and when used with white lead, does not turn yellow like the oil of flaxseed, when exposed to the light. Poppies can be grown upon soil too sandy and light to produce flax. Why should not this new crop be sown in this country? Who will try it?

SOUTHERN RURAL ALMANAC AND PLANTATION AND GARDEN CALENDAR for 1851, by Thomas Affleck, Washington, Adams county, Miss. This is a neatly-executed pamphlet of 132 pages of highly instructive matter, which is useful to every planter in the South. Several southern staples are therein treated at considerable length and with much judgment and ability, and we hope to hear that the work has a wide circulation. We are glad to see that the enterprise commenced by Mr. A. some years since, the publication of "The Plantation Record and Account Book," is extending and likely to be generally adopted. We are also pleased to see that Mr. A. has commenced an extensive southern nursery; and from his taste, energy, and experience in this department, we anticipate for him entire success in his undertaking. We are certain, at least, he will deserve it.

PHOSPHATE OF LIME.—We have it in our power, at last, to record the discovery of an extensive deposit of phosphate of lime, at Crown Point, on the north shore of Lake Champlain. It is said that 92 per cent. only of the rock is phosphate, but even this amount will render it a valuable acquisition for the farmer's fields. In some of our previous volumes, we noticed the absence of any information on this subject in the extended report of the state geologists, and then predicted we should ere long find some deposits of this valuable manure which they failed to detect. We shall hope for the speedy discovery of still richer, and to us and the farmers of the Atlantic seaboard, more accessible accumulations of this long-stored treasures.

Review of the Market.

PRICES CURRENT IN NEW YORK, JANUARY 13, 1851.

ASHES, Pot,.....	100 lbs.	\$5.50	@	\$5.56
Pearl,.....	" do.	5.62	"	5.69
BALE ROPE,.....	" lb.	9	"	11
BARK, Quercitron,.....	" ton.	33.00	"	35.00
BEANS, White,.....	" bushel.	75	"	1.50
BEESEWAX, American, Yellow,.....	" lb.	20	"	26
BOLT ROPE,.....	" "	10	"	11
BONES, Ground,.....	" bushel.	45	"	55
BRISTLES, American,.....	" lb.	25	"	65
BUTTER, Table,.....	" "	15	"	25
Shipping,.....	" "	9	"	15
CANDLES, Mould, Tallow,.....	" "	25	"	30
Sperm,.....	" "	25	"	30
Stearine,.....	" "	5	"	10
CHEESE,.....	" "	5	"	10
COAL, Anthracite,.....	2,000 lbs.	6.50	"	7.00
CORDAGE, American,.....	" lb.	11	"	13
COTTON,.....	" "	12	"	16
COTTON BAGGING, Am. hemp,.....	" yard.	15	"	16
FEATHERS,.....	" lb.	27	"	35
FLAX, American,.....	" "	8	"	9
FLOUR, Sour,.....	" bbl.	3.62	"	4.12
Ordinary,.....	" "	4.18	"	5.00
Fancy,.....	" "	5.25	"	6.75
Buckwheat,.....	" "	—	"	—
Rye,.....	" "	3.75	"	3.88
GRAIN—Wheat, Western,.....	" bushel.	1.00	"	1.25
Red and Mixed,.....	" "	90	"	1.10
Rye,.....	" "	75	"	80
Corn, Northern,.....	" "	69	"	74
Southern,.....	" "	68	"	72
Barley,.....	" "	88	"	93
Oats,.....	" "	48	"	53
GUANO, Peruvian,.....	2,000 lbs.	47.50	"	50.00
Patagonian,.....	" do.	—	"	40.00
HAY, in Bales,.....	" 100 lbs.	70	"	75
HEMP, Russia, Clean,.....	" ton.	210.00	"	230.00
American, Water-rotted,.....	" "	160.00	"	200.00
Dew-rotted,.....	" "	140.00	"	175.00
HIDES, Southern, Dry,.....	" lb.	6	"	11
HOPS,.....	" 100.	2.00	"	10.00
HORNS,.....	" 100.	4.80	"	4.90
LEAD, Pipes for Pumps, &c.,.....	" 100 lbs.	5	"	7
LARD,.....	" lb.	7	"	8
MEAL, Corn,.....	" bbl.	3.09	"	3.37
MOLASSES, New-Orleans,.....	" gallon.	30	"	33
MUSTARD, American,.....	" lb.	7	"	10
NAVAL STORES—Tar,.....	" bbl.	1.75	"	2.00
Pitch,.....	" "	1.25	"	1.75
Rosin,.....	" "	1.30	"	1.40
Turpentine,.....	" "	2.14	"	2.87
Spirits of Turpentine,.....	" gallon.	38	"	40
OIL, Linseed, American,.....	" "	90	"	95
Castor,.....	" "	1.05	"	1.15
Lard,.....	" "	65	"	75
OIL CAKE,.....	" 100 lbs.	1.25	"	1.50
PEAS, Field,.....	" bushel.	75	"	1.50
Black-eyed,.....	" 2	1.75	"	2.20
PLASTER OF PARIS,.....	" ton.	2.00	"	2.75
Ground, in Barrels of 300 lbs.,.....	" "	1.12	"	1.25
PROVISIONS—Beef, Mess,.....	" bbl.	7.00	"	10.00
Prime,.....	" "	3.75	"	5.25
Smoked,.....	" lb.	6	"	12
Rounds, in Pickle,.....	" "	4	"	6
Pork, Mess,.....	" bbl.	10.00	"	12.50
Prime,.....	" "	6.50	"	9.50
Bacon Sides, Smoked,.....	" "	3	"	4 1/2
In Pickle,.....	" "	3	"	4
Hams, Smoked,.....	" "	4	"	9
Pickled,.....	" "	4	"	7
Shoulders, Smoked,.....	" "	4	"	6
Pickled,.....	" "	3	"	5
RICE,.....	" 100 lbs.	3.00	"	3.50
SALT,.....	" sack.	1.00	"	1.60
Common,.....	" bushel.	20	"	35
SEEDS—Clover,.....	" lb.	6 1/2	"	9
Timothy,.....	" bushel.	2.00	"	4.00
Flax, Rough,.....	" "	1.80	"	1.85
SODA, Ash, (60 per cent. soda),.....	" lb.	3	"	—
Sulphate Soda, Ground,.....	" "	1	"	—
SUGAR, New-Orleans,.....	" "	5	"	8
SUMACH, American,.....	" ton.	35.00	"	37.00
TALLOW,.....	" lb.	7	"	8
TOBACCO,.....	" "	4	"	15
Eastern, Seed-leaf,.....	" "	15	"	20
Florida Wrappers,.....	" "	15	"	60
WHISKEY, American,.....	" gallon.	25	"	26
WOOLS, Saxony,.....	" lb.	50	"	60
Merino,.....	" "	40	"	50
Grade Merino,.....	" "	30	"	40
Common,.....	" "	20	"	30

NEW-YORK CATTLE MARKET.

At Market 1,800 beef cattle, (500 southern, the rest from this state,) 90 cows and calves, and 6,000 Sheep and Lambs.

Beeces.—Business has been rather dull the week past—the market supplied with more than purchasers are ready to take, at the current prices, which, for good retailing qualities this week, may be quoted at from \$5.50 to \$8; the latter price rather hard to get.

At the up-town market, 40 head were taken for the supply of the Bermuda naval contract. About 350 unsold.

Cows and Calves are rather slow of sale. Prices range at from \$20 to \$47, 20 left over.

Sheep and Lambs are from 2s. to 4s. per head lower. The market is plentifully supplied, but the demand slack. Sales at from \$1.75 to \$3, as in quality. About 1,500 unsold. Jan. 14

REMARKS.—Since our last, corn, oats, and wool have advanced, while barley and guano have fallen.

The Weather has been quite cold up to the 7th, with deep snows, north and west of us; while in this city and on the seaboard around, scarce any snow has fallen. Since the 7th, the weather has become mild and spring-like, with some rain.

TO CORRESPONDENTS.—Communications have been received from A. S. M., George Barber, C. S. Augustus, C. F., G., Thomas Roberts J., A Young Farmer, and G.

Winter Arrangement.—S. Edwards Todd, of Lake Ridge, Tompkins county, N. Y.—As your article comes too late for our February number, we have concluded to lay it over till next November, when it will be in season.

Petition to the N. Y. Legislature for the Protection of Sheep against Dogs.—Too late for this number—will appear in our next.

Virginia Lands.—J. H. D.—The price of eligible lands varies from \$5 to \$50 per acre. Mountain lands may be had for 50 cents per acre. If you wish for more definite information, refer to the back volumes of the Agriculturist.

Cast-Iron Horse Power.—C. F.—Taplin's Power is best for you. See our catalogue, page 40. You can use one horse or five. One of 80 foot circle costs \$80. Had you not best change your horse? Any steady horse works perfectly well in a Railroad Power.

ACKNOWLEDGEMENTS.—Proceedings of the Annual Exhibition of the Philadelphia Society for Promoting Agriculture, held in October, 1850; Third Annual Report of the Virginia and Tennessee Railroad Company; Report of the Naval Committee on Establishing a Line of Steamships to the Western Coast of Africa, and thence via the Mediterranean to London, with an Appendix added by the American Colonization Society; Third Annual Report and Transactions of the Worcester, (Mass.) Agricultural Society, for the year 1850.

FARMERS' AND PLANTERS' TOOL

Chests. We have fitted up a number of tool chests especially for the use of farms and plantations, variously assorted with suitable tools, and at prices ranging from \$20 to \$100.

Chest No. 1 contains a Hand Saw, set of Planes, Hand Axe, Nail Hammer, Hatchet, Drawing Knife, Steel Square, Trying do., Oil Stone, Compasses, Chalk Line, four Framing Chisels, four Firmer do., and four Augers. \$20.

No. 2 contains, in addition to the above, a Back Saw, Compass Saw, and Carpenter's Adz, \$26.

No. 3 contains, in addition, a Broad Axe, Mallet, Spoke Shave, Gauge, Saw Set, Brad Awls, and Nail Punches, \$31.

No. 4 contains, also, a brace of Bits, Bevel, Rabbit Planes, Panel Gauge, four Files, and five additional Augers and Chisels, \$40.

No. 5, a large Jointer, two Rabbit Planes, two Bed do., two Match do., Plow and Bits, Hand Gauge, and Spirit Level, are added, \$54.

No. 6 has an extra fine brace of Bits, three Bed, and one additional Rabbit Planes, Gages, Files, &c., \$62.

No. 7, one Panel Square, one pair of Match Planes, one dozen heavy Firmer Chisels, Slitting Gauge, Trying Square, Fillister, and Carpenter's Rule are added, \$70.

No. 8, Gutter Plane, Sash do., Circular do., two Dado Planes, Compasses, Adz, and Tape Line are added, \$80.

To these may be added any other tools required, such as Pinchers, Pliers, Drills, Hand Vice, Punches, Rivets, Soldering Tools, suitable for repairing harnesses; and, in fact, almost any kind required upon the farm or plantation, at a reasonable addition to the price of any chest ordered.

A. B. ALLEN & Co., 189 and 191 Water st.

SELLING OFF TO CLOSE THE BUS-

ness. Limnaan Botanic Garden and Nursery, late of William Prince, deceased. Flushing, Long Island, Near New York. WINTER & Co. Proprietors.

The proprietors have still remaining, a very considerable stock and variety of Fruit and Ornamental Trees, Shrubs, Vines, Plants, Roses, &c., which they will dispose of for cash, at a reduction of 25 to 50 per cent. and upwards, from the usual prices, according to kind and quantity. Descriptive Catalogues, gratis, on application, post paid.

Apple trees, two to four years old, from \$5 to \$10 per 100. Pear trees, two to four years old, \$25 to \$50 per 100. Cherry trees, two years old, \$12.50 per 100. Orange Quinces, three and a half to five feet, \$12.50 per 100. Black Hamburg and other Foreign Grape Vines, extra strong plants, \$5 per doz. Two-year old seedling Plumb Stocks, \$7 per 1,000.

WINTER & CO.

THE AMERICAN LIVE-STOCK INSURANCE COMPANY, Vincennes, Indiana.
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CAPITAL \$50,000!

For the Insurance of Horses, Mules, Prize Bulls, Sheep, and Cattle, of every description, against the combined risks of Fire, Water, Accidents, and Disease.

Losses paid in 30 days after proof of death.

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BRANDE'S ENCYCLOPEDIA OF SCIENCE and Art.—A Dictionary of Science, Literature, and Art; comprising the History, Description, and Scientific Principles of Every Branch of Human Knowledge; with the Derivation and Definition of all the Terms in General Use. Edited by W. T. Brande, F. R. S. L. and E., assisted by Joseph Cauvin, Esq. The various departments by eminent, literary and scientific gentlemen. Illustrated by numerous engravings, on wood. 8vo., sheep extra. \$4.

This valuable work, for accurate information upon a vast variety of subjects brought up to the present day, and carefully digested, is unrivalled and unequalled.—*Tail's Magazine.*

Clear and authentic, copious without prolixity, it does not furnish a bald explanation of facts and terms, but a development of principles well illustrated and explained.—*Times.*

He who has no encyclopedia will find it an excellent substitute for one; and he who has, will find it a valuable supplement. While it is sufficiently full and copious to supersede the necessity for the more gigantic works of an encyclopedic character, no mere cyclopedia can supply its place.—*Eclectic Review.*

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SCHOOL OF APPLIED CHEMISTRY.
 Yale College, New Haven. John P. Norton, Professor of Scientific Agriculture. The Laboratory of this department is now open, and instruction is given in all branches of Chemistry, Organic and Inorganic. Particular attention is paid to Agricultural Chemistry; and students in this branch have every facility afforded for acquiring a knowledge of the analysis of soils, plants, &c. A course of Lectures on Scientific Agriculture, by Professor Norton, commences in January, and continues two and a half months. This is intended to present theory united with practice in a plain and distinct manner, so that the general principles can be comprehended by all. Analyses and investigations made, on reasonable terms. For further information, apply to
 d3t Professor J. P. NORTON, New Haven, Ct.

COMMERCIAL GARDEN AND NURSERY
 of Parsons & Co., Flushing, near New York. The proprietors of this establishment offer for sale their usual assortment of Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c. Their stock of Apples and Pears is finer than any they have before offered. Also, Pears on Quince, of their own growing. The Ornamental Department contains the usual well-known varieties and all the best new Trees and Shrubs for Lawns and Arboreta, including the new Pines, Araucaria imbricata, and Cryptomeria japonica, with Cedar of Lebanon, at one to two dollars each, and Cedrus deodara of various sizes, at one dollar per foot. Catalogues furnished gratis on application by mail.
 o tf **PARSONS & CO.**

GREENHOUSE PLANTS, VINES AND
 Roses. Parsons & Co. offer for sale every desirable variety of Greenhouse Plants, and many valuable novelties recently introduced from Europe. Attention is particularly directed to their fine stock of Camellia wilderit, the perfection of whose form is not attained by any other variety. The original stock, both of this and C. Abbey Wilder, is in their possession. Growers of Grapes are invited to examine their Vineries, now in full fruit, and from which they can furnish good vines of about forty varieties, at
 50 cents for those one year old.
 75 " " " two years old.
 \$1.00 " " of extra size.

Their stock of saleable roses includes some thousands on their own roots of the Remoutant, Bourbon, China and Garden Roses, in their various sub-classes. Catalogues furnished gratis on application to Flushing, near N. Y. **PARSONS & Co.**
 o

FRUIT TREES FOR SALE.—50,000 Peach Trees, all of the best market varieties, at the following prices:—By the single hundred \$3. One thousand, \$35. And ten thousand for \$400. Also, 40,000 Apple Trees of the best market varieties, and of large size. By the single hundred, \$12.50, or one thousand for \$110. Mats and packing, \$1 per hundred for Peach, and \$2 for Apple Trees. Catalogues will be forwarded to all applicants.
ISAAC PULLEN,
 Hightstown, Mercer Co., New Jersey.

GREAT SALE OF DAIRY STOCK.—The subscriber will offer for sale, without reserve, at Public Auction, on Tuesday the 25th day of March, 1851, at 12 o'clock, on the farm on which he resides at Morrisania, Westchester county, N. Y., upwards of 100 head of Cows and Heifers. About 50 head are Native and Amsterdam Dutch Cows, selected by the subscriber with reference to milking qualities. The remainder, about 50 head, are grades, one half, three quarters, and seven eighths blooded. Heifers from one to five years old, bred by the subscriber out of the very best of cows, and got by the celebrated imported shorthorned bull Marcus, and so far as they have come to maturity, they appear to combine with most faultless symmetry, nearly every point indicative of perfection in a dairy cow. Taking the whole dairy together, it is, perhaps, the best selected in the United States. The cows, with a few exceptions, are all young and in calf by the fine bull Amsterdam. The many premiums that I have been awarded by the State Agricultural Society and the American Institute give evidence of my success as a breeder. I will also sell my shorthorned cow that took the first Premium at the American Institute Fair in October last, two two-year-old heifers, and one yearling, all thorough bred. Two yoke of very superior working cattle, with several fine horses, one boar of the Russian grass breed, one imported, improved Berkshire sow and pigs, one Suffolk sow and Pigs. The number of hogs, in all, will be from 50 to 60, and some of them as fine as can be produced. All the farming utensils, also those of the dairy, which are numerous. A catalogue and description of each animal will be given on the day of sale. Stock purchased to be sent to a distance will be delivered by the subscriber, on ship, canal, or railroad cars, in the city of New York, free of risk and expense to the purchaser.
 Morrisania is nine miles from New York by Harlem Railroad.
 f 2t* **THOMAS BELL.**

SITUATION AS A FARM MANAGER
 Wanted. A middle-aged man who has devoted many years to agricultural pursuits, and who perfectly understands the breeding and diseases of cattle, the cultivation of green crops, &c., is desirous of obtaining an agency or the management of a farm. Respectable references can be given. Address
 f 1t* "AGRICULTURIST," Office of this paper.

FOR SALE.—The Dwelling House and about seven acres of ground adjoining, situated in the center of Northampton, Mass., formerly occupied by Thomas Napier, Esq. The house is in complete repair, with all the modern improvements. It commands a beautiful view of the Connecticut Valley, and is within half a mile of the railroad. For particulars, inquire of
 f R. L. ALLEN, 189 Water st. N. Y., or
 S. S. HINCKLEY, Albion Hotel, Boston.

ENDLESS-CHAIN PUMPS, OR WATER
 Elevators. These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.
A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults of privies, where the contents are in a semi-liquid state.

EAGLE PLOW.—No. 28.—The following extract from the letter of a gentleman who purchased one of these plows, fully explains its character. "In answer to your inquiry how I like the great breaking plow, I have to say it entirely exceeds my expectations, and even your own recommendation, which I then thought quite extravagant. I put on four stout yoke of oxen, and drove into the thickest patch of scrub oak roots upon my farm; not without some misgivings, that I should break the plow instead of the roots; but I have now turned over twenty acres as completely as though I had been nothing but stubble, and the plow is this day better than it was when it came from your store. I think it the cheapest and best plow for such heavy work ever invented."

These plows are for sale at our Agricultural Warehouse, No. 5, 189 and 191 Water st., New York. Price, plain, \$18—full rigged, with wheel, draft rod, and cutter, \$30. **A. B. ALLEN & Co.**

GARDEN AND FIELD SEEDS FOR 1851.
 We are getting in, not only our usual supply, but a larger stock than ever, of all kinds of seeds required, either for field or garden culture, fresh and free from noxious weeds, &c., which are offered at wholesale or retail. Orders for trees and shrubbery executed as usual.
 f **A. B. ALLEN & Co. 189 and 191 Water st. N. Y.**

MINER'S BEE HIVE.—This beautiful and valuable Hive, may be had of the subscribers, and sent to any distance, for \$5, including a Right to make the same; with full directions, so simple that any joiner can make it for only \$2. This hive is positively the best that has ever been sold in the United States.
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THE SUBSCRIBERS keep constantly on hand, and offer for sale the largest and most complete assortment of Agricultural and Horticultural Implements, and Field and Garden Seeds in the United States, among which may be found the following:—

WATER RANS—of various sizes, for raising water, made entirely of metal.

CIDER MILLS of simple construction, and capable of grinding fine, and in the most rapid manner.

MILL FOR GRINDING BONE-DUST.—For sale, a second-hand mill, to be driven by horse, steam or water power.

WINTER WHEAT.—Etrurian, Mediterranean, White Flint, and several other varieties, of the best and most improved kinds of Winter Wheat for sale.

TIMOTHY, fresh reaped, a choice article.

BLUE GRASS, Fresh Kentucky, just received, suitable for lawns, and early and late pastures.

CLOVER, both Red and White, free from all foul seed.

WAGONS.—Single or double of any required shape. Also, Axles and Wheels.

CARTS.—Hand and Ox Carts, and Wheels of different sizes, made of the best material at short notice.

FERTILISERS of various kinds constantly on hand and for sale on reasonable terms—such as
GROUND PLASTER—in bags or barrels.
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FOREIGN SEEDS, of superior quality and late importation.

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ENDLESS-CHAIN PUMPS of all sizes, to be furnished complete, or in either of their parts, both in large and small quantities.

HIGHLY IMPROVED FORCING PUMP and Garden and Fire Engine, a better and cheaper article than ever before offered in the New-York, or any other market, to be sold in any quantity.

NEW AND HIGHLY IMPROVED LACTOMETERS.—We have just got up a new article of cream gauge, far better and more accurate than any heretofore made. Price \$5, with a liberal discount to dealers.

CHEAP SOUTHERN PLOWS.—Nos. 10¹, 11¹, 12, 14, 15, and every variety, including several new and highly popular kinds, for sale in large quantities.

ROOT PULLERS.—A useful instrument for drawing out bushes, roots, and small stumps.

VEGETABLE BOILERS, used for boiling food for stock, holding from 15 to 120 gallons.

PREMIUM FANNING MILLS.—These machines considering the simplicity of their construction, and efficiency of all their operations, are the best in use.

SAUSAGE CUTTERS AND STUFFERS.—These will save nine tenths of the labor in cutting sausage, or other mince meat.

EAGLE PLOWS.—Many plows having been sold under the name of the *Eagle Plow*, which are not genuine, this is to give notice that all plows sold in this city under that name, to ensure confidence, will have our name marked on the beam, and no others purchased here, can be relied on as genuine without this brand.

Be particular, also, as to the name, number, and street, which should be

A. B. ALLEN & CO., 189 and 191, Water st., New York.

BRICK MACHINES of the best construction, will make 10,000 to 15,000 bricks per day by hand.

GRAIN MILLS.—Steel and Cast-Iron Mills at \$6 to \$25, and Burr-Stone at \$75 to \$250, for Horse or Steam Power.

PUMPS.—Suction and Forcing Pumps of all sizes with pipe, at lowest manufacturers' prices.

CORN AND COB CRUSHERS, of different varieties, efficient and durable both for hand and horse power.

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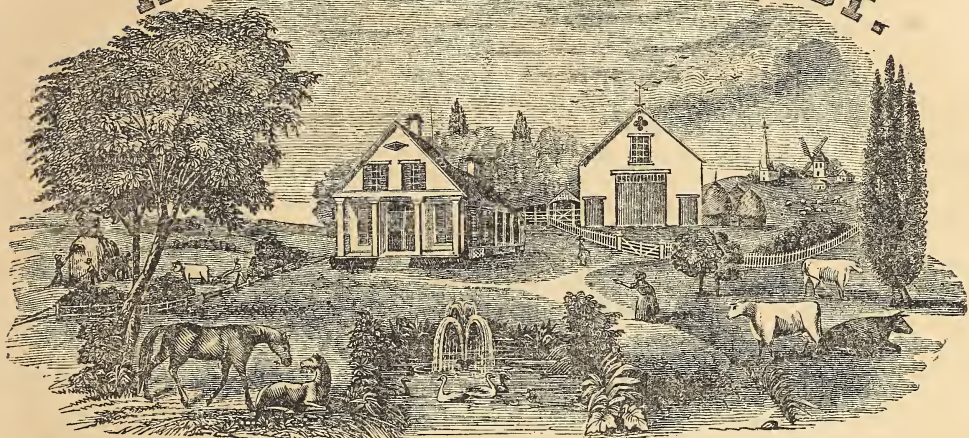
Price of single Power,	\$80
“ Thresher,	\$28
“ Separator and fixtures,	\$7
“ Bands for driving, etc.,	\$5 to \$10
“ Wood-sawing machine, complete, and in running order,	\$35
Price of Double Power,	\$100
“ with Thresher, Separator, &c.,	\$140 to \$150

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AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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A. B. ALLEN & R. L. ALLEN, *Editors.*

C. M. SAXTON & E. BLANCHARD, *Publishers*

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REVIEW OF THE NOTES OF A FOREIGNER ON AMERICAN AGRICULTURE CONTINUED.

NOTWITHSTANDING the length to which this notice has been extended we hope it will not prove uninteresting to our readers. We could not give the article entire, on account of its great length; because, among its many good things, it contains so much crude and incorrect matter, that it should not be republished without correction. We do not accuse the writer of intentionally misrepresenting things; he is by far too honorable and high-minded a man for that; but it shows how difficult it is for a stranger to learn facts about a country where everything is so new and strange to him, and where he has so little opportunity during a mere flying visit to make himself acquainted with the minutiae of matters concerning the people.

The following contains a due mixture of truth and error:—"It is worthy of remark, that the real American farmer is amazingly fond of change; he may be said to be always emigrating, never settling. However comfortable he may be, he is always contemplating the possibility of being off, sooner or later, to other 'dig-gins.' An offer of cash down will decide him at once; he will soon strike a bargain and be off. Often as they change, they are 'cute' enough to change always for the better. Americans are considered to be the best original settlers; they seem to have an aptitude for clearing land. On the other hand, they fail generally in improving lands; probably from the want of trying, or the requisite knowledge. English farmers make poor original settlers, but they almost invariably succeed in improving cleared or partially-cleared lands."

It is also worthy of remark that *some* American farmers are fond of change; but the idea conveyed is, that all are so, which is by no means the fact. Neither is it a fact that they are always "cute" enough to change for the better. In our estimation, one fourth, at least, of those who emigrate from the old states to the new ones, do so to their decided disadvantage, both in property, comfort, and health. That they make the best "original settlers," just as they do every original undertaking, is one of the self-evident facts to be seen all over the country. We are willing to grant the palm to English farmers for being the best improvers of land at home, but they do not invariably succeed in America, by a wide difference.

Roads and Plank Roads.—It is no wonder the writer was surprised at the "awful" condition of our roads. But what would he have thought

if he had seen them at the worst? such as we have often seen in the new western and south-western states, where they are not only almost impassable, but quite so for loaded teams. What he says of plank roads as being excellent contrivances, is not half what might have been said in their favor. "The roads leading from the farms to the villages, and even to the large towns, are very badly constructed; they are really, as a Scotchman gravely remarked to the writer, 'awful.' In summer, the quantity of dust is positively amazing; in winter, the mud is equally striking. In the 'fall' and 'spring' seasons; that is, at the beginning of the rainy seasons and the breaking up of the winter, they are sometimes almost impassable. A farmer informed us that, having occasion to go to a mill some two miles distant, it took him nearly three hours, and his horses were quite exhausted with their efforts. In districts sufficiently populous to pay for their construction, a species of road is laid down, called a 'plank road.' These roads are excellent contrivances, and facilitate the communication between farms and market towns very much. Although they are of comparatively recent introduction, immense tracts of country are laid with them. They are supported by tolls, those in the state of New York demanding six cents, (three pence,) for a single-horsed gig or buggy, for a run of eight or ten miles. The mode of laying them down is very simple, and may be briefly described: The line of road is marked out and levelled as much as possible. As they are generally laid down in the track of roads previously made, the centre is raised, leaving a hollow on each side, into which the water may run off from the planks through small holes or drains. A track little broader than the breadth of a coach or wagon, (if for a single line,) is marked out; and on each side of this, planks some eight or nine feet long, eight inches broad, and three thick, are laid parallel thereto. These are laid end to end, thus forming a double line of planks along the road. On the top of these side supports, the planks on which the carriages run, forming the roadway, are laid; these project a little beyond the side supports; they are generally some ten to fourteen inches broad, and two or three thick. The side of the embankment is brought up so as to cover the ends, and the road is complete."

To this we add, the planks are usually seven feet long and so laid that the ends form an uneven line to facilitate loaded wagon wheels rising when coming on the road, or in passing

others; and experience proves there is very little necessity of a double track.

The figuring up of western farming looks well on paper—the reality is hardly ever equal to the figures. These words are quoted from Mr. Ellsworth, in speaking about wasting manure on the Wabash lands: “I was surprised to find hundreds of loads carted at an expense of $12\frac{1}{2}$ to 20 cents, and thrown into the river to get it out of the way.”

That remark was made in 1846, when he first emigrated from the poor lands of Washington, and previously from the gravelly hills of Connecticut, where manure is the main stay of the farmer. In 1849, Mr. Ellsworth said to us, “I have got well cured of my Yankee notions of hauling manure four miles from town to put upon my prairie land—it won’t pay. I have fallen into the common mode of hauling it to the river and sending it on a voyage to the Gulf of Mexico.” That the time will come when all the now fertile lands of the west will pay for an application of manure cannot be doubted.

What will some of the log-cabin boys of the west think of this Englishman’s knowledge of building the almost universal habitation of all new-country settlers. He says: “The first operation is cutting timber suitable for building. Having fixed on a site near a spring, for the house, the operation of building is begun. To build a log cabin is a very simple matter.

“Set posts in the ground, (if yellow pine is selected it will last for many years,) nine feet above the surface, in front, and seven in the rear. Stout poles or split logs, flattened at the ends, placed horizontally, and one upon the other, should be spiked or pinned to these posts all around; the upper ones in the front and rear laid on the top of the posts, in which a notch should be cut to receive them, taking care that they are sufficiently stout to bear the roof, which is to be formed of poles laid one end in the front and the other in the rear of the building. These poles should be covered with inverted sod, then earth, and sod again, surface uppermost. The openings between the side poles or logs must be filled up with clay, and a snug, weather-tight cabin is at once made. A comfortable floor may be made of lime, or clay and marl, taking care to have the ground on which the building stands a little rising. A chimney may be constructed in the usual way; that is, with logs and clay; or, if a stove is used, which is better, the pipe may go through the roof, giving the part which is exposed to

the weather a coat of tar and sand, both inside and out.”

Has anybody in America ever seen such a cabin as here described? If so, he has seen a sight that never dawned upon our vision in fifty thousand miles of travel in nearly all the states and Canada.

POULTRY RAISING.—No. 4.

In the October number of the *Agriculturist*, I remarked that the in-and-in breeding of any particular variety of the foreign breed of fowls, (now so highly extolled in some interested quarters,) where one would wish to keep them very extensively, would ultimately destroy the purity of the breed. Of the truth of this assertion, you seemed to have considerable doubt, and ask me to show my facts. Happily for my reputation as a truthful writer, you bring forward the proof yourselves, in the November number, p. 332, reading thus: “A portion of the fowls belonging to Constant Clapp, Esq., were formerly of the ‘downy’ breed, but this variety so strongly marked had run out and entirely disappeared for eight years.” This being the result of in-and-in breeding, as the article states, it freely corroborates my statement. [The circumstance to which our correspondent here alludes, was doubtless caused by crossing the “downy” breed with some other varieties, and the re-appearance of the down was what is technically called “crying back.” In breeding in-and-in, if due care is observed in selecting healthy, and perfectly-formed animals, with the males not too nearly related to the females, our word for it, this mode of breeding will not *very* “soon produce their ruin.”—Eds.] I consider that such a result must inevitably occur where there is no opportunity to change a portion of the fowls at periods of from three to five years, for others of the same pure blood from other fowl yards.

Laying Ability of Fowls, etc.—In keeping fowls as a matter of profit, the principal desideratum is, to procure those that will produce the greatest number of eggs annually; at the same time, consuming a moderate quantity of food, and being easily fattened, and the flesh of good flavor. As I have before said, the newspaper accounts of particular cases of very productive laying, are not to be relied on as being what can be effected generally. All the various statements made in different parts of the country by persons keeping from 20 to 200 fowls of the average number of eggs laid by each fowl per annum, where sitting is not allowed, may

safely be laid down at about 80. It is not probable that any kind of fowls can be made to exceed this number as their general product. The devices resorted to in order to force fowls to lay in the winter season, by the means of artificial heat, in my opinion, are not productive of any benefit to the owner, in the end. You can but get your 80 eggs per annum, though you keep your fowls during the winter where the thermometer never falls below 60° or 70° F. What you gain in cold weather, you lose in warm. But, say you, "the eggs are much more valuable in winter." I doubt it; but you expend more than the difference in value in producing the necessary heat. Again, you subvert the order of nature. The sun was made to give light by day, the moon by night; the day is a period of labor, the night, one of rest; so in like manner, is there a season for fowls to lay, and a season of rest. If you force them to lay out of season, you weaken their producing powers, and when spring approaches, instead of the lively, cackling red-combed hen, you have one worn out and unproductive. Look, if you please, to the fowls of warmer climates. Do they produce more eggs than those of our own latitude? Not at all. And though the earth be covered with verdure and the trees clothed with a green, umbrageous foliage, yet the dunghill fowl rests in her productiveness as the colder months approach, and even there she produces no more eggs, in the aggregate, than at the north. I think that he who is not satisfied with the state of things which nature demands, is going beyond the province of man in thus seeking to bring forth what the God of nature never intended to be.

Not only should we look for such fowls as will insure the maximum average number of eggs, but the quantity of food that they will consume, must also be brought into account. It is often said by persons having a favorite variety of the large breed of fowls, that "they do not consume any more than the smaller breeds." This is said, I presume, without any intention to deceive, in many cases, and the error has been committed by not having been particular to ascertain positively the amount actually fed out. Sometimes the house slops furnish half enough to feed a couple of dozen of fowls which are not brought into the account at all. Again, some speak at random, "guessing" at the amount eaten. Where is the animate being of the quadruped kind, that does not eat in proportion to its size? How can it be expected that a fowl like an ostrich will consume no more

food than one of ordinary size? It cannot be; and let interested men, who have fowls to sell, say what they please on this point, it is incontrovertible that large fowls will eat in proportion to their size. This being a fact, large breeds can never be so profitable as smaller ones, taking all things into consideration.

The mania now existing in some sections for fowls that can walk over a common five-foot fence at a single step, is one of the wildest and foolishlest notions of the age. Nothing but the novelty of the thing has brought such fowls into notice. Probably in the very countries where these mammoth fowls are natives, our own native breeds would be hailed as a great acquisition. So much for the restless disposition of men for something *new*. I would here caution every one who feels an interest in fowl breeding, to beware of much that emanates from the vicinity of Boston, in praise of these mammoth breeds.

T. B. MINER.

Clinton, Oneida Co., N. Y.

WHAT CAN I DO ?

WHAT one man can do towards arousing a spirit of improvement has lately been shown to a great extent in Norfolk county, Massachusetts. If Marshall P. Wilder had put the question to himself, and then sat down contented, that he could do nothing, at the time he first agitated the subject of forming the Norfolk-county Agricultural Society, it is not very likely that upwards of twelve hundred ladies and gentlemen would have sat down together, to enjoy the pleasures of a social dinner, as they did last fall, at their second anniversary.

What Can a Woman Do? is a question sometimes asked by the same class of do-nothing men, who put the first question. In that county, the farmers' wives and daughters have proved themselves capable of infusing such life and spirit into the mass, by the interest they have taken in the annual fairs, that they are now looked upon as the great anniversary holidays, and reunions of society.

Sensible Premiums.—Among other sensible things connected with this society, is the offer of liberal premiums for the best family-baked bread. At the last fair, there were sixty ladies with a hundred and seventy-five loaves, competing for the prize, or rather, prizes. Colonel Wilder gave two silver cups, and several other gentlemen gave three or four half barrels of flour, and twenty dollars in cash. Some of the bread offered was surpassingly excellent, while the other was just such bread as one half the

world are daily eating. Another premium is offered for the best-managed farm, for five years. Another for the best and exemplary young farmer. Another is talked of to be awarded to the mother who best fits her daughters to become farmers' wives.

Effects of Offers of Premiums for the Best Crop of Wheat.—In a county, where everybody said the power of the soil to produce wheat had been long exhausted, one farmer has produced 30 bushels and six quarts to the acre, of the Black-Sea variety. His process was to plant one year in corn, with manure spread and plowed in eight inches deep. For the wheat, he used a light compost, five cords to the acre, valued at \$7.50, and eleven bushels of unleached ashes, valued at \$1.37½. Total, \$8.87½. The wheat was worth at home, \$1.50 a bushel. Another person raised 29, a third 24, and another 19 bushels to the acre.

The secret of the great success of all of these gentlemen was deep plowing, thorough draining, and high manuring. Colonel Wilder very justly remarks, "it is just as easy to feed a crop of wheat, as it is to feed an ox; and with more certainty of producing a profitable result."

NEW-YORK MARKETS.—No. 1.

THOUSANDS of our readers have never visited this metropolis—perhaps have never seen a great city market place, where the daily food of many thousand human beings is exposed for sale. It used to be, in our youthful days, a great mystery to us, how so many persons as we were told, dwelt in places where the roads were all paved with stones, and the houses touched each other, could live without a pork barrel, potato cellar, pig pen, or hen roost, and where they not only bought their milk, but water, too.

The mystery is not yet quite cleared up in our minds, though we have no doubt now about the abundant supply of provisions; but how all, who eat, obtain their food, is another question. If we could draw truthful pictures of city life for farmers' sons and daughters to look at, it would teach them to love their own homes—they would contrast their plain, but wholesome, sweet and clean food, with some of the miserable stuff sold in our markets, and exclaim, "God made the country—man made the town"—let us be contented with His work.

With a view to add to that contentment, we propose to devote a few pages of the present volume, in giving some slight sketches of our market places—those great marts of things,

clean and unclean, upon which human life is here sustained. It may be instructive and amusing to those who have not yet availed themselves of the cheap facilities of railroad travelling, to visit New York, to fancy themselves taking a stroll with us among hecatombs of oxen, mountains of mutton, pyramids of pork, and piles of poultry, in Fulton Market. Do not fancy you will see a palace nor a market house that is an ornament to the city, like those of some of the towns in Canada, nor like Quincy Market, at Boston. On the contrary, you will find it a common, dirty-looking, one-story building, with an arched roof, about two hundred feet square, three sides of which are elevated so as to form basement rooms underneath the floor that contains the butchers' stalls, which extend in a double line along two sides of the house, while the third is occupied by a scaly company, composed of all manner of fish that swim in the waters between Cape Cod and Cape Fear.

The central portion, which is on a level with the street, is also roofed over, paved, and is occupied with a mixed multitude of everything that is eatable, to say nothing of that portion which is not. Here you will see an uncounted and an uncountable quantity of barrels, boxes, baskets, tubs, and stacks of vegetables and fruit; and tons of poultry, eggs, butter, cheese, lard, and tallow, in all sorts of packages, except those in which neatness is particularly predominant. Upon one side of the square, is a row of dreary-looking cells, in which a large number of people are continually eating a great number of oysters, stewed, raw, and roasted. The quantity of this kind of food consumed in this city, if it could be correctly ascertained, would surpass belief.

Around the market house, upon the pavement, are the retailers of apples, nuts, cakes, and all sorts of trinkets and nick-nacks. Here sits an old woman knitting, by the side of the same table at which she has sat for many a long year. She not only sells the products of her own labor, but that of a great number of sets of knitting needles, busily plied around some country fires. A little further on, sits another and another, selling all manner of fruits in their season. What a listless life, to sit all day long in the same place, day after day and year after year, trafficking by the cent's worth with every person passing by, who desires to gratify his longing for the luscious fruit spread out to tempt his appetite. Here sits a woman week after week through the fall months, cracking hickory nuts unceasingly. All these market

women appear as though they were a portion of the human family set apart for that particular calling; and long usage in it has unfitted them for any other. Here is one, who has been known to the old residents, for at least forty years. She was one of the fixtures that was removed from the Old Fly Market, when the Fulton Market superseded it. Judging from her healthy and robust appearance, she may still sit in the same stall through summer heats and wintry blasts, for forty more long years—a fit emblem of patience on a monument not “smiling at grief,” but still peddling potatoes.

But who comes here, rustling in silks and laces, with jewels glittering in the sun? She stops to talk with the old market woman; she is about to purchase something, more out of a charitable feeling, perhaps, than a want of the article. No, instead of giving, she is receiving money—a large sum too—what can it mean? “Thank you, mother.” Is it possible? That word explains the whole. This is the lady’s daughter in her silk-velvet mantilla, that the old market-woman mother in the same old-faded camlet cloak, sitting in the same old chair which she sat in before Miss was born.

Across the street, alongside the East River, is the wholesale fish and live-poultry market. We have seen sweeter and more pleasant places for a morning walk. In fact, the whole market is most notoriously free from all appearance of neatness, convenience, comfort, or adaptability to the purposes of a great mart of human food. Yet, what a motley crowd throng hither every morning for their daily provisions. Lessons of economy may be studied here advantageously. Here comes now a woman in a tattered shawl and weather-beaten bonnet, carefully counting her scanty stock of change, studying as she walks, how to expend it to the best advantage. Let us follow silently and observe whether her skill is equal to her necessity. First she buys a coarse-grained, worthless fish, because she can get a large one for a shilling. Her next purchase is half a peck of potatoes, at the rate of a *dollar* and a *half* a *bushel*—the dearest food in market, unless it is the half of a half peck of turnips, at half the price of potatoes, which she next buys. The large cabbage head, at ten cents, will do but little better. How much better, how much more economical it would have been for that poor woman, who has a large family to feed, if she had purchased a soup bone of beef, or a scrag of mutton, in place of the fish; and instead of the potatoes and turnips, the same value in dry beans, or some of

that sweet-looking hommony, so temptingly spread out upon the next table to that where she bought the potatoes. Yes, and at a less price per bushel than those; but she knew nothing of the economy of buying one, instead of the other, and therefore followed the course that long habit taught her, when potatoes were cheap and corn dear. As we pass up Fulton street, you will be struck with surprise at the enormous piles of baskets and brooms, which pass daily through the ordeal of buying and selling in the immediate vicinity of Fulton Market.

At some future day, we will accompany you through Washington Market, where more farm produce is bought and sold in the course of the year, than in any other provision mart in America.

IMPORTS AND EXPORTS OF THE UNITED STATES.

WE subjoin a list of the imports and domestic exports from the United States for the year ending June 30th, 1850:—

Products of the sea,.....	\$2,324,818	
do forest, including wood, timber, and its manufactures, pot and pearl ashes, furs, ginseng, pitch, &c.,.....	7,442,503	
<i>Products of Agriculture.</i>		
Beef, tallow, hides, horned cattle,.....	\$1,605,608	
Butter and cheese,.....	1,215,463	
Pork, bacon, lard, hogs,.....	7,550,287	
Horses and mules,.....	139,404	
Sheep,.....	15,753	
Wool,.....	22,778	
Wheat, bush,.....	608,661	643,745
Flour, bbls.,.....	1,385,448	7,098,570
Indian corn, bush,.....	6,595,092	3,892,193
Indian meal, bbls.,.....	259,442	760,611
Rye meal, bbls.,.....	69,903	216,076
Rice, tierces,.....	127,069	2,631,557
Rye, oats, and pulse,.....		121,191
Ship bread,.....		334,123
Potatoes,.....		99,333
Apples,.....		24,974
		26, 371,753
Cotton, Sea-Island, lbs.,.....	8,236,460	
“ Upland “.....	627,145,141	\$71,984,616
Leaf, tobacco, hhds.,....	145,729	9,951,023
All other agricultural products,.....		152,365
		\$82,082,004
		108,459,760
<i>Manufactured Articles.</i>		
Cottons, printed and colored,.....	\$606,631	
“ uncolored,.....	3,774,407	
All other manufactures of,.....		353,386
		\$4,734,424
Iron, pig, bar and nails,.....		154,210
“ castings,.....		79,318
All manufactures of,.....		1,677,792
		\$1,911,320
All other manufactured articles,.....		6,645,740
Coal, tons,.....	38,740	\$167,090
Salt, bush,.....	319,175	75,103
Ice,.....		107,018
		349,211
Raw produce not specified,.....		679,556
The exports for the year previous, amounted to \$132,666,955.		
Foreign exports for the same period.		
Specie—gold,.....	\$2,511,786	
“ Silver,.....	2,962,367	
Tea, 1,662,399 pounds, valued,.....	733,757	
Coffee, 15,287,479 “.....	1,299,546	

Sugar, brown, 12,186,113 lbs.,	476,905
“ white, 1,680,874 “	111,302
“ loaf, 286,078 “	17,223
Iron—Sheet iron, 90,129 lbs.,	3,120
Pig iron, 6,450 cwt.,	5,679
Bar, rolled, 9,835, “	15,130
Manufactured otherwise, 3,657, cwt.,	13,676
Coal, 6,480 tons,	13,776
Brandy, 66,443 gallons,	59,550
Spirits from grain, 32,282 gallons,	15,177
“ other materials 180,388 gallons,	26,306
Cordials, 638 gallons,	1,068
Salt, 31,046 bushels,	9,668
Total of exports, \$151,898,720.	

Imports for the same period.

The following table exhibits the imports for the fiscal year, ending June 30th, 1850.

Iron and steel—muskets and rifles, value,	\$27,424
Other fire arms,	354,877
Side arms,	1,542
Drawing and cutting knives,	10,808
Hatchets,	2,477
Chisels,	9,914
Steelyards and scale beams,	6,584
Vices,	29,088
Sickles,	1,082
Scythes,	14,358
Screws,	161
Spades and shovels,	8,120
Squares,	2,091
Needles,	231,325
Cast-iron bolt hinges,	20,998
Cutlery,	4,284,538
Other merchandise of iron,	3,427,180
Irons,	736
Bonnet wire,	3,714
Iron and steel wire,	78,055
Nails, 2,656,786 lbs.,	119,786
Spikes, 31,311 lbs.,	9,086
Chain cables,	599,811
Saws,	7,942
Anchor,	43,028
Anvils,	76,822
Hammers and sledges,	6,000
Castings,	83,882
Round and square iron,	54,574
Nail and spike rods,	10,058
Band and scroll iron,	31,847
Hoop iron,	176,938
Sheet iron,	659,058
Pig iron,	1,497,487 cwt.,
Old and scrap, 202,090 “	385,870
Bar, rolled, 4,059,022 “	161,981
Bar otherwise, 294,132 “	7,397,166
Cast steel, 101,876 “	744,735
Other steel, 25,641 “	1,106,800
Lead—Pig, bar, sheet and old, 35,997,084 lbs.,	225,362
Bullion—Gold,	1,182,597
Silver,	\$9,257,240
Specie—Gold,	\$26,316
Silver,	1,090,722
Teas—28,752,817 lbs.,	2,825,820
Coffee—144,986,895 “	4,426,542
Guano—3,940 tons,	4,588,373
Woolens—Cloths and Cassimeres,	11,915,076
Merino shawls,	91,948
Blankets,	6,184,190
Worsted stuffs,	935,348
Hosiery,	1,244,335
Other articles not specified,	5,004,250
Cottons—Printed, &c.,	718,135
White, &c.,	1,880,526
Tampered,	13,610,291
Hosiery,	1,773,302
Yarn and thread,	1,267,286
Unspecified,	1,558,173
Silks—Piece goods,	799,156
Hosiery,	858,422
Tampered, &c.,	14,459,560
Unspecified,	616,217
Silk and worsted,	1,131,462
Flax—Linen,	872,380
Unspecified,	1,653,809
Spirits—Brandy, 4,145,802 galls.,	\$7,063,184
From grain, 751,183 “	1,031,638
Other materials, 339,169 “	2,659,537
Cordials,	361,073
Sugar—Brown, 197,651,819 lbs.,	113,770
White, 19,977,312 “	32,447
“ 796,217 “	6,659,543
Salt—11,224,185 bushels,	846,939
Coal—18,439 tons,	43,604
Total value of imports for the year ending June 30th, 1850,	1,237,186
	\$187,217,574

It will be seen by the foregoing, that we are at the same game we played in 1835 and '36. Our imports have exceeded our exports by the snug little sum of \$30,000,000 in a single year, and after all due allowance for profits accruing to our commercial interests, from exchange freights, &c., the result of our last year's financial operations will leave us a debt of over \$20,000,000, which we have temporarily provided for by sales of stocks of every hue and description. We trust our countrymen will come to their senses in time, and check this most inordinate importation before it is too late.

Look at the enormous quantity of silk imported, about \$19,000,000; cottons, \$19,000,000 more; woolens, about \$16,000,000; linens, over \$8,000,000; brandy, 4,000,000 gallons; bar iron, over \$8,000,000; and this, too, while more than half the furnaces and forges in this country are lying still, and many of our cotton and woolen mills are idle for want of adequate protection from the pauper labor of Europe.

What an immense difference would result were all these articles made at home, and our beef, butter, grain, &c., consumed by our own manufacturers; and while our farmers were obtaining larger prices for their products, by the increasing home consumption thus secured, the competition in agricultural products would be lessened by the large quantity of labor withdrawn from their over production.

CULTIVATION OF CRANBERRIES.

From the Barnstable Patriot, we copy the subjoined statement from the Report of the Committee on Fruit, of the Barnstable-County Agricultural Society:—

The following is a statement of the course pursued by me in the cultivation of the cranberry. July 12th, 1845, I purchased for \$40, one and a half acres of land—about one half a sandy beach, and the remainder a low peat meadow covered with water. A rim of about six feet in width around the bog and between the water and the beach, had a few cranberry vines on it, which had been closely fed off. In the spring of 1846, I drained the bog and covered about one eighth of an acre with sand three inches thick, and set it with cranberry vines in rows two feet apart, and hoed them four times in the season of 1846, and once in the spring of 1847. The grass then got advantage of me, and I left the vines to work their own way. They have now nearly overcome and worked out the grass and rushes. On the remainder of the bog, I strewed vines, and trod them into the mud, by walking over them. These

grew without any further care except flowing in the winter. In the fall of 1848, I gathered from ten rods, where no sand had been spread, as many bushels of cranberries, while on the part sanded I had as many quarts. The latter are now doing better, having got the advantage of the grass, and I think will finally work it out. I have this year, on the quarter of an acre offered for premium, quite a good crop, although the worms destroyed nearly one half. I have picked one square rod of the light-colored variety, set in mud, and it yielded two bushels and twelve quarts. The large red variety yielded on the mud two bushels to the square rod. The whole quarter is not yet gathered; it will yield about thirty-five bushels, about one half of the vines being set on mud and one half on sand.

In selecting meadow for cranberries, it is highly necessary to select such as will not dry in summer; but much also depends on the selection of the vines, as the committee will see by the samples here presented, all having the same soil and the same treatment. The samples are not selected, but sent in precisely as they grew. The whole expense on the above bog, up to the present time, does not exceed \$40.

I have received from the sales of cranberries, up to the fall of 1845,	\$320
Deduct for picking, one fourth,	\$80
All other expenses for setting, interest, &c.,	40
	— 120
Net profits,	\$200

EDWARD THACHER.

Yarmouth Port, October 15th, 1850.

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VILLAGE LECTURES—No. 5.

Now, I must not forget that I ought to be referring more especially to the fact that all people and all living animals are loading the air with the poisonous gas which comes up through the windpipe chimney, from the furnaces burning inside them. But let us still further digress for one minute, just to point out the fact which thus appears, that a large portion of the food an animal eats, is in reality wasted—spent as fuel—burned up within it, just to maintain its bodily heat. And the farmer might take a hint from that; of course, if his feeding cattle or sheep are exposed to cold and rain, they will need burn more fuel to keep the heat of life within them. Keep them warm artificially, and less of the turnip and hay which they eat will be burned up within them; keep them quiet in stalls or boxes, instead of in yards

or fields, where they can run about, and the bellows will not work so actively, and the fire will not burn so fiercely in their lungs, and less of the food will be spent in the mere act of burning as fuel—more will be available for the purpose for which food is given; that is, for the formation of fat and the promotion of growth. It is not unfrequently the case that a lot of sheep, folded out in cold weather on the turnip field, gain no flesh at all. The fact is, every bit of food that is eaten by them is burned up within them just to preserve animal heat, and the farmer might just as well have thrown it all into the fire at once; but house those sheep, or feed them in sheltered yards, where they lose heat less rapidly, they will not need so much fuel to keep themselves comfortable, and some of their food will form flesh.

Now let us return to the fact that the air is being poisoned by all this breathing and fire-burning. You will find that a very little breathing through some lime water will make it muddy enough, proving how much more carbonic acid, and how much less oxygen, there is in the air that is breathed out, than in the air that is breathed in. The fact is, the air we breathe out contains 100 times more carbonic acid than the air we breathe in. A man, by the union of the air he breathes in with the carbon of his food in his lungs, throws out in his breath in this way, in the course of a year, about 1½ cwt. of charcoal, as much, perhaps, as there is in a sack of coals. Indeed, the quantity of carbon or charcoal thus added to the air every year by the breath of all the animals, human or otherwise, in Great Britain, is estimated at 2,000,000 tons' weight.

Well then, the air would very soon become unfit for man and other animals to live in, were it not for the beautiful arrangement of carbonic acid gas, being sent into the air, that plants remove it. As fast as charcoal in fires and candles and in food is uniting with the health-giving oxygen of the air, and forming the deadly gas, the plants are decomposing its carbonic acid, and taking the charcoal forming their own selves out of it, and giving back the health-giving oxygen pure to the air again; so that thus, the air is maintained fit for use. It is only in the daylight, or sunshine, that plants have this power, however, and you know that if you want to blanch a plant, a rhubarb plant for instance; that is, hinder it from becoming woody, or hinder it from decomposing the carbonic acid of the air, and so obtaining charcoal to form wood, all that you have to do is to keep it from the light.

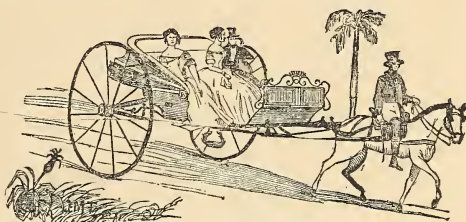
And again, if wheat is too thick and luxuriant in spring time, so as to hinder the light from getting in upon its stems, those stems will be unable to decompose the carbonic acid of the air; they will be unable to procure charcoal to make them hard and woody; they will be white and succulent, without strength, and liable to be laid by the rain; but mow those top leaves off, or let a lot of sheep bite them off, and you let the light in upon those stems, and they will regain the power they have lost, and they will strengthen and harden in consequence of again being able to procure their woody substance from the air. But that they can decompose the carbonic acid of the air, and, retaining its charcoal, give off the pure healthy oxygen, can be proved. I have taken a number of cabbages, one after another, on successive days, cutting them about mid day, when they might be supposed to be full of the gas, if ever they took any at all, and exposed them under water to the sun. Very soon, bubbles of gas collected in the top of the glass, and on examination it was proved, by their ability to burn things brilliantly, that they were pure oxygen. Those cabbages had been collecting the deadly gas as I and you were breathing it out, and as every chimney over a fire was sending it into the air, and they were decomposing it and sending the healthful part of it back to the air and keeping the charcoal to themselves. See, then, how important the air is to plants, as well as to us; it provides them with all the woody part of their substance; it provides us with the breath we live upon, and the fires that warm us. See how important the process of combustion, whether slow as in the case of ordinary decomposition, or more rapid as in the case of respiration and ordinary burning, is to plants. Unless, in this manner, the air was continually supplied with this poisonous gas, plants might exhaust it of all the materials on which they feed and live. See how important plants are to us; they keep the air healthy for us, deprive it of those noxious gases which would otherwise soon collect and destroy us, forming their own substance at the expense of our enemy; so that the very thing which would destroy us is made to provide us with food and with fuel through their means. See, too, how admirably the growth of evil, in the natural as well as in the moral world, is checked and made productive of good in the end, by the overruling hand of God's Providence.

Thus much, then, we have learned regarding the air in connection with agriculture; it pro-

vides the plant with its woody substance; it keeps up the warmth of the living animal by burning a portion of its food in its lungs.—*Ag. Gaz*

LARGE WHEELS ON ROUGH ROADS.

THE advantages of large wheels on rough roads are strikingly exemplified in the *quitrin* and *volante*, vehicles in common use in Havana and other parts of the island of Cuba.



QUITRIN.—FIG. 14.

The wheels are some ten feet in diameter, and to the axletrees, elastic tongues, or shafts, some 15 or 20 feet in length, are attached, and over the axles, a top or covered body, is mounted, resembling the top of our New-England chaise. From the rough state of the roads on the island, these vehicles have been used for a great number of years, for which they serve an admirable purpose. By the large size of the wheels, an increased leverage is obtained, and they more readily overcome the obstructions they meet with in the form of gulleys, stumps, and stones. From the great length, also, of the shafts, they are quite elastic, and impart an easy motion to the carriage on level roads as well as those that are rough.

DISCOVERY OF AN IMMENSE VEIN OF PHOSPHATE OF LIME.

THIS locality of phosphate of lime, I discovered, at Crown Point, in 1847, and published an account of it in my report, under the name of *euprychroite*, regarding it as a new kind of mineral. Since that time, I have also made reference to this mineral, and particularly in the agricultural journal which I conducted at one time; and I often expressed the wish that some one would open the vein and determine its value and extent. But no one seemed to regard it in a favorable light. I was instrumental, last fall, in opening this mine. It turns out to be a solid vein of phosphate of lime, eight feet thick, at least, and has been traced a long distance from northwest to southeast. It is known to contain 92 per cent. of phosphate of lime, with fluorine and chlorine, iron, or a sulphuret of iron and copper, in small proportions, furnishing

thereby, phosphoric acid for bones, muscles, and organs of the body, fluoric acid for the formation of the teeth, sulphur for the protein compounds—and if you add the alkali, we may easily prepare a compound suitable to meet the wants of animals and vegetables, so far as inorganic matter is concerned. It is an important discovery for agriculture, as it gives us a source for this expensive fertiliser, phosphoric acid, a substance which enters into the composition of all living things, and is second in importance to oxygen, only.

This phosphate may be furnished to a great extent, though I may not say that it is inexhaustible, yet, it will last a long time. I would obligate myself to furnish 100,000 tons. For Long-Island farmers and for the south, it may be made to take the place of guano and bone dust. It must be used as a super-phosphate, although the simple use as plaster, would supply the waste of fields of the phosphates; yet, it would be dissolved slowly in its present state. In the long run, it would benefit lands equally well; yet, people now-a-days like to feel and see the immediate effects of the labor of their hands.

In addition to the vein of phosphate of lime, there is a trap dyke beside it, which contains, also, 40 to 50 per cent. of the phosphates. I have engaged Professor Norton to make a critical examination of the substances connected with these veins. I have made only one experiment with the phosphate. I find that, for wheat, on a sandy soil, it works admirably; it produces a dark-green, stout blade, and bears the absence of rain much better than when the ordinary fertilisers are employed.

In a geological point of view, this locality of phosphorite, is exceedingly interesting, and I think it will lead to other discoveries of the same kind; and I think, too, that it will be found that many of our trap dykes and igneous rocks abound in this mineral, and that this will explain the fact, that soils derived from them are often very fertile, and produce excellent grass. The condition of the Crown-Point phosphorite is the same as that which is contained in the soil. Carbonic acid is the solvent in nature. Those, who are engaged in the manufacture of artificial fertilisers, will find it a valuable addition to their compounds.

E. EMMONS.

Albany, Jan. 12th, 1851.

TEACH CHILDREN to love everything that is beautiful and you will teach them to be useful and good.

CULTIVATING AND EMBELLISHING RAILROAD EMBANKMENTS AND GROUNDS.

THE following sensible article from the North-British Agriculturist is particularly applicable to this country, not only as regards railroads, but all other thoroughfares. These remarks of Mr. Copperfield, however, apply only to the railroads of Scotland. In England, they are generally beautifully turfed, cultivated, or planted with trees:—

Those who are in the habit of passing along the various railways which now intersect the country in all directions, cannot fail to have observed the immense tracts of ground on either side of them, lying in a useless state, producing nothing but plentiful crops of weeds, which ripen their seed in perfection, and which is scattered over the neighboring fields by every gust of wind, to the great annoyance of the farmer and others, who hold land in close proximity to them. It appears strange that in these speculative times, no one has ventured to suggest any scheme, whereby the railway embankments may be turned to profitable account. It is only here and there we find small patches laid down in grass, for the purpose of making it into hay, which, after all, is but a scanty crop. And it is not only the embankments themselves, but considerable breadths of ground, that have been taken by the railway companies, which might be rendered useful, instead of as now, supplying the whole country side with what it can very well dispense with weeds. Perhaps some of our correspondents, who have more experience in such matters than I can boast of, may suggest some plan for turning such waste ground into profitable account, that can be carried into effect.

DAVID COPPERFIELD, SEN.

[By calculation, it has been estimated that every mile in length of railway occupies eight imperial acres of land, the loss of which to the community, is, no doubt, far more than compensated for, by the vast advantages afforded by them, both to the agriculturist and commercialist; yet there is little doubt but that many hundred acres of their sloping banks might be profitably cultivated. The first step, however, in the improvement of railway banks, should commence in the decoration of the grounds immediately in connection with the various stations; for, strange to say, although thousands of pounds have been next to thrown away in the erection of almost palaces, small attention has been paid to the dressing of the ground

around them. The Edinburgh and Northern, the Edinburgh and Glasgow, and the Caledonia lines are conspicuous for want of taste in this respect, while innumerable instances occur, on the southern lines, of improvement both in style and keeping; and singular enough, the nearer we approach the great metropolis, the more highly kept are the grounds around them, and the greater the amount of good taste is displayed. The best specimen of well-kept grounds around a railway station, we have observed in Scotland, is that at Portobello, which may be taken as a model, although less favored in point of situation than many others.

Our friend, Mr. Copperfield, should have known that various plans have been suggested for turning into profitable account these immense spaces, now, as he very justly observes producing only crops of weeds, seeds that can well be dispensed with. Sowing down the banks with grass seed is not with a view to profit by the hay made, but to establish a surface less likely to be run down by rains. Planting them with trees, would, we think, be the most profitable; but then, while such reckless carelessness is allowed to go on, on the part of the enginemen and stokers, and for want of securing the sparks of fire from the chimney tops, which could easily be provided against, we might expect to see a railway conflagration which might not only burn down the trees on the embankment, but set fire to a whole country side. Were fire guarded against, there can be no doubt but a judicious selection of trees and shrubs would not only make in time a good return to the proprietors, but would render the monotony of weedy and unprofitable surfaces extending for miles, less painful to the eye of taste, and more cheering to those of travellers, in general. Tall-growing trees have been very properly objected to, as in the event of storms blowing them over, the thoroughfare might be impeded; but the same objection could not be made to fruit trees trained up the inclines, or plantations of gooseberries, currants, strawberries, &c. But these and every other mode of turning these slopes to profitable account would be liable to injury from fire. Much, however, might be done by ornamental planting around the stations, and the introduction of flowering shrubs and plants.—Hort. Ed.]

FARMERS' BOYS should be taught never to say "*I can't do it*, for that never did anything. "*I'll try*," has worked wonders; and "*I will do it*," has performed miracles.

A JAUNT IN OHIO.—No. 2.

I WAS disappointed in my first impression of Cincinnati. I had supposed it to be chiefly built on a broad table above the first or lower bottom of the river, with the hills at some distance in the rear of the town, as doubtless such a site would have been selected, had its founders dreamed of the future extent of their infant city. Instead of such, the town is built on a narrow belt of land, shut in by high hills, which are intersected by two small streams—Deer and Mill Creeks—and a few ravines, up the valleys of which the city follows the great thoroughfares to the back country, and has for many years, also, been cutting into the high hills which stand in the way of its progress, or in other parts has climbed up their precipitous sides in most inconvenient, although not unpicturesque proximity, to their more humble and accessible neighbors. The town is, in the main, regularly laid out, so far as the intersection of streets and avenues are concerned, which are of good width, and most of them well graded and paved; but the strange intermixture of manufactories of all sorts—the smokes, and noises and hammerings, and stench, rising up in the midst of stores and shops, and dwellings, and covering everything with coal dust and soot, certainly makes a queer mixture of occupation and residence. Here are streets of fine dwellings, spacious, rich, and costly, built of the best of bricks, and a most beautiful drab-colored free stone, which is quarried somewhere up the river—and a more beautiful building material I never saw. Magnificent and extensive stores, warehouses, churches, banks, and hotels, among which is the Burnet House, probably the finest in its architecture and arrangements, in America, various public institutions, belonging to sundry societies and corporations, churches, market houses, all mixed in, cheek-by-jowl, with tall, smoky chimneys, and workshops, with their clacking hammers and artificers of every description, all driven by steam, and fed and warmed by bituminous coal, give it an appearance and character unique altogether.

Then there is the deep, horse-pond-looking river, lying low down between red shelving banks; then at its lowest stages, but rising, I was told, in its highest floods, 60 feet above, and up into the stores of the lower streets, filled with three-story steamboats, flatboats, rafts, and barges, with whole coveys of coal cribs lying moored along the shores and quay, taking in and discharging passengers and cargoes, or waiting for a rise of water to go up or down,

as the case may be; with the two towns of Covington and Newport, on the opposite shore, the deep, sluggish, narrow Licking, of Kentucky, between them, and these filled with smokes, and furnaces, also, all gave a character, Pittsburgh excepted, anomalous, almost, in America; yet, in its evidences of thrift and industry, highly gratifying to one who enjoys a scene of activity and bustle.

Taking any of the thoroughfares leading out of Cincinnati, after passing the gorges of the hills—which, in the progress of their cutting down and filling up the intervening hollows, present a most raw, jagged appearance—a beautiful, high, and undulating country is presented, on occasional portions of which still remain fine groves of the grand old beech forests of original growth, and dotted with fine houses, surrounded with well-cultivated gardens, grounds, vineyards, and orchards, many of them the abodes of business men in the town, or retired citizens. Here, too, are numerous market gardens, nurseries, green and hothouses, dairies, and various other establishments that minister to the wealth and luxury, and enjoyment, both of the suburban residents, and the people of the city. Many of these, I visited and received the attentions and hospitalities of their proprietors and occupants, and examined the nice cultivation of their gardens, fruits, and flowers, in the propagation of which, they show much taste and discrimination. Almost every one who has a garden, has also a vineyard, more or less extensive, of the Catawba grape—the grape *par excellent* of this region, both for wine and the table. There are several hundred acres of vineyards about Cincinnati, from which many thousands of gallons of wine are annually produced; and the best Hock, and Champagnes of the hotels are the production of the neighborhood. The founder of vineyards here is the veteran Mr. Longworth, whose wealth and enterprise have proved equal to surmount all difficulties in their growth, and the manufacture of the fruit into wines to an entirely successful result, so that wine is henceforth to be one of the staples of the Ohio Valley. So general, indeed, has the production of the Catawba grape become, that it is now, in its season, carried by the wagon load into the Cincinnati markets, as common as either potatoes or cabbages, and by its cheapness and abundance, is largely consumed by all classes of people. The Isabella grape does not thrive so well here as at New York; either the climate or soil not being so congenial to it as the Catawba. I should remark that the soil of

these hills and valleys is a calcareous, clayey loam, intermixed with and based on limestone, which abounds in the hills a few feet below the surface, and frequently cropping out on their sides, furnishing any quantity for building materials and lime. The vineyards on the steepest hills are cultivated in terraces five to ten feet wide, with a step bank to the next terrace, of two to three feet high, the vines set four to five feet apart, with usually two vines to a hill, and trained to stakes about six feet high. Five to a dozen bunches were the products of each hill, according to age and cultivation, then in full ripeness for the vintage which was to commence the coming week. Mr. Longworth has about 150 acres in vineyards, cultivated by tenants, chiefly Germans. This gentleman has introduced and cultivated other varieties of grapes than the Catawba, from which, particularly the Herbmont, excellent wines have been produced; but the Catawba, so far, has proved the surest and most profitable of them all. Such kinds will unquestionably be cultivated, and probably hereafter make equally valuable and varied qualities of wine.

The chief autumn show of the Horticultural Society was held the week that I spent in Cincinnati, and well proved the attention and skill which is displayed in that department. In the luxuriance of fruit, flowers, and vegetables, I never saw this exhibition excelled; and in the constant attendance of the proprietors and producers of these fruits and flowers, and vegetables, during the exhibition, and their delight in the display, so different from the affectation of our would-be “merchant princes and savans” of the eastern cities, who, with few exceptions, usually exhibit through their gardeners, and in their readiness to communicate all their experience and knowledge in production, I was delighted. The fruits are large, larger than in our more northern latitudes, particularly the apples and peaches, and their size, I think, is attained somewhat at the expense of flavor; yet they are very showy, and in most instances fine. The yellow bellflower, a noble fruit, even in New York, is here in still greater perfection. Many other varieties of apples are also cultivated, some introduced from our eastern orchards, others indigenous to the soil, delicious and beautiful.

I had long heard of the superiority of the Cincinnati markets. They struck me as not so. They are full, abundant, and cheap, but not superior in quality to those of New York and Philadelphia. The sweet potato of Ohio, though plenty and of enormous size, is clammy and

far inferior in flavor to the same vegetable from Virginia, or even Delaware, or New Jersey. Other vegetables are of like kinds as with us. Meats are but on the average; and although poultry and eggs are cheap, abundant, and good, they show no superiority in quality, to ours.

There is much that is both excellent and superior in the natural production about Cincinnati. The soil is rich, the climate mild and salubrious; and an abounding supply of all edible things for the thronging population within and around it. Though neither grand in position, nor picturesque in scenery, or where grandeur and magnificence are distinguishing features in the landscape, can it compare with many of the cities of our land; yet it has many pleasant surroundings, and is among the most useful of our American towns; and in the intelligence, the public spirit, the untiring industry, the urbanity and kindness of her people, and in the pursuit of the great and essential objects which benefit their race and promote the common prosperity of the state, there is no place of its population which takes rank with Cincinnati.

A VISITOR.

AGRICULTURAL GEOLOGY.—No. 6.

CLAY soils, from their peculiar nature, perhaps, always retain a certain amount of ammonia diffused throughout them. There are very few of them that have undergone tillage from which ammonia, as a gas, cannot be obtained in small quantity. This useful element may have been derived from two sources; either from the decomposition of vegetable roots in the earth whereby carbonic acid and ammonia are evolved, or from the absorption of atmospheric air into the soil, the renewal of its oxygen, and the residual nitrogen united with some hydrogen escaping from decomposed mould. This, although a small source, is in all likelihood, a constant one, and when it occurs in clay soils, the alumina acting as a sponge in its moist state, absorbs the gas into its pores, and retains it for a time. This ammonia escapes on drying the soil by a gentle heat, and unless looked for carefully is often not estimated as being present.

The majority of these chemical properties, which a clay soil manifests, such as its tendency to absorb moisture carbonic acid, ammonia, and its affinity for potash, are exhibited with the exception of the last, only when it is moderately moist. When excessively wet, its absorption power, of course, ceases; and when it is dry, the changes cannot go on; that is, neither air nor vegetable matter can be decomposed. This

is a peculiarity of clayey soils which cannot well be remedied. No mixing with sand, or gravel, nor lightening its physical texture will accomplish it.

In clayey soils, then, there are periods when they are overactive in producing chemical changes, such as evolution of oxygen, the formation of ammonia and carbonic acid; and in a few cases, the formation of nitric acid; and there are, also, periods of no action, as in time of drought. This may be one cause, quite independent of its physical texture, why clayey soils are favorable to the growth of some plants and not others. It cannot be the mere tendency to retain moisture which would cause this difference. It possibly may be attributable to the impatience of the presence of a large quantity of oxygen which injures the roots.

There is one very striking peculiarity in the soils derived from slate rocks, as well as in the soils overlying slate districts, namely, the very small quantity of lime which exists in these soils. In the analyses of slate soils, made in the Laboratory of the American Agricultural Association, the minute proportion of lime present is remarkable; nor is this true of slate merely, but it has been observed as true with regard to the slate soils of the United States, generally, when contrasted with those of Europe. In Great Britain, there are few soils to which lime has not been added for many years, that still 1 or 2 per cent. may not exist, and 4 or 5 per cent. of carbonate of lime is often found in stiff clay soils. What may have been the cause of this difference in the presence of lime in American drift and slate soils, compared with those of Europe, it is almost out of place here to speculate upon. The soils being derived from the slate rock, the first question arises, Does the slate rock differ on the two continents? The answer here is also given in the affirmative. It must be due, then, to some causes operating over the American hemisphere at the time those rocks were deposited, whereby lime did not become an element entering into their composition. Some difference existed either in the depth of ocean which then overlaid this continent, or a different race of animals existed in these waters which did not separate the lime from the sea water to form a bony shell, or probably both these causes existed together. In other words, the seas, which covered the present slate districts, were too deep to allow of coral-forming animals to exist, and unfitted for their numerous univalve and bivalve mollusca, which form a calcareous coat to exist in. This is the usual

way, (the calcareous coating of animals,) in which lime exists in the secondary rocks. It is rare that it forms a reef by having been deposited in comparatively shallow water as a mud, carried down by streams, and depositing itself in a coat over the bottom of the sea. Some of the slate rocks of this state contain the lime in this condition, localised however, very much; that is, between the beds of true slate, at intervals of 100 to 200 feet, a bed of pure limestone mud is found, sometimes with shell remains, at other times without, varying from 10 to 25 feet, occasionally not more than 30 inches thick. The hydraulic limestone of this state is of this character, termed in the survey of the state, the "Manlius water limestone," an analysis of which made in the Laboratory of the American Agricultural Association afforded in 100 parts

Silicates of alumina and iron	
insoluble in acid,	63.0
Silica soluble in acid,	4.0
Alumina,	4.5
Peroxide of iron,	0.5
Carbonate of lime,	15.0
Magnesia,	11.0
Oxide and sulphuret of manganese,	2.0
	100.0

What has been termed the "Tully limestone," a thin seam of pure workable stone, fit for building and burning, which lies between the beds of slate, and stretches through Ontario, Yates, Seneca, Cayuga, and the other counties in a line eastward towards the Hudson, is also a bed of limestone mud, containing, however, a few shell fossils peculiar to it; two samples of which, taken 15 miles apart, analysed in the laboratory, yielded in 100 parts

	No. 1	No. 2
Insoluble silicates of alumina and iron,	15.0	4.0
Alumina and peroxide of iron,	23.0	26.0
Carbonate of lime,	53.5	60.0
Magnesia,	2.8	5.5
Manganese,	—	1.0
Soluble salts as chloride of sodium,		
and sulphate of lime,	1.2	2.4
Potash with traces of phosphoric acid,	trac's	1.0
	100.0	100.0

In all of these may be perceived the large amount of clay and iron, which accompanies the carbonate of lime, as well as the proportion of insoluble silicates; all these being in very minute grains in the rock, showing the fine condition of muddy sand, of which it had been composed. It contains more than one half its total weight of carbonate of lime, and when burned without too violent a heat, affords good lime.

Whatever may be the true cause of this absence of lime in the soil, of the fact there is no doubt, and its effect upon the growth of plants deserves our special consideration, which we shall take up in our next communication.

GEORGIA BURR MILLSTONES.

ALTHOUGH this kind of stone has been known and used for a hundred years, it is like the discovery of the action of the water ram, or the well-known fertilising qualities of guano, which, though known for an equal length of time, required the spirit that actuates the present age to bring it into general use. I had often heard of it, and sometimes heard it spoken of approvingly, and at other times with doubt, and often as of little value, and for the reason it was but little known or used. Stones made of French burr blocks were brought into the state in the almost immediate vicinity of the quarry, and millers contended, and still contend, that no other material exists that is suitable for millstones, except that of France.

While at Savannah the other day, I sought the opportunity of examining this Georgia product, at the store of Messrs. Hoyt, agents of an association recently formed, called the "Lafayette Burr-Millstone Manufacturing Company," who now have some 20 or 30 hands employed, and will soon increase the number to meet the demand. The quarry is 100 miles from Savannah, and six miles from the Macon Railroad, upon the plantation of P. B. Connelly, extending over a tract of about 1,700 acres, near the line of Jefferson and Burke counties. Previous to the time the present proprietors commenced, in 1849, about a thousand pair of millstones had been made, and although many of them in a rough manner, and the blocks not so carefully selected as at present, yet, not one has ever been known to be discarded, and generally they have been highly approved. Still, as the opinion has prevailed that nothing but French burr would make good wheat flour, this invaluable quarry has laid almost idle and worthless up to the past year or two. The quantity is inexhaustible. It is generally near the surface, but the ground is considerably broken by creeks and ravines, and the veins of grit are from six to twenty feet thick. There are excellent sites for mills, where the power of water might be used for shaping the blocks, with machinery lately invented for cutting stone.

The face of the blocks, when dressed, shows a surface quite as open as French burr, free from all loose pebbles, sand, iron nodules, and veins. In fact, the cavities when examined with

a powerful magnifying glass, appear as though they were coated with an enamel of pure quartz, and present an immense number of fine, sharp-cutting edges. Years of exposure to the atmosphere, or change, and I am assured that the blocks stand fire perfectly, and that there is no difficulty in selecting them so as to form the whole stone of exactly the same quality and of equal goodness throughout the whole thickness.

The present price of millstones is about the same as French burr, but the great abundance of material and the constant increasing demand, will enable the company to supply stones or blocks at a price so much below those imported, that every American farmer has a direct interest in this American quarry. So far as my own opinion is worth in promotion of this new branch of home production, I give it most freely in favor of the Georgia burr over any other in the world. I saw many letters from millers to corroborate this opinion. I recommend the proprietors to take immediate measures to introduce these stones into all the northern states. They should establish an agency at once in New-York City, not only for the sale of the manufactured millstones, but the blocks, also, so that those now manufacturing from imported blocks may obtain a full supply of an article not only superior in quality, but less in price—one of the products of the teeming soil of America.

SOLON ROBINSON.

Macon, Georgia, Jan. 6th, 1851.

A. B. Allen & Co. are appointed the New-York agents for the above millstones, and will be pleased to answer any enquiries regarding them.

MULCHING ORCHARDS—CULTIVATION—PLANTING.

In the September number of the *Agriculturist* is an editorial notice of my practice in mulching fruit trees; but as there are two or three errors of fact in the notice, I proceed to correct them, and detail further at length the benefits of such treatment. You say "the trees were set in a *hard clay* soil, and had made little or no growth for four or five years past." Not so. The soil is a rich clay loam, with a clay subsoil at the distance of a foot to 18 inches below the surface. The trees have been set about five years—were a scrubby lot of natural stocks from an old nursery, which, by the way, I never ought to have planted; for although I got them for half the price of good, thrifty

worked trees, it was a decidedly bad bargain, as the latter kind of trees, set three years afterwards, are now quite equal to them in growth.

As soon as the trees were planted, which was in the month of April, they were grafted at about branch high with good kinds, and most of the grafts took and grew well. The land was then in hoed crops and oats. But as I found it very difficult to keep teams from vexing and tearing the trees, I laid it down the second year to grass, since which it has been mowed. Every spring since it was so laid down, the trees have been well dug around the trunk for two or three feet each way, making a soft, cultivated bed of four to six feet in diameter. Still the trees did not make the growth they should have done, which I attributed mainly to the excessively dry summers we have had for three years past, and the roots were exposed to drought, from the fact of the bare surface of earth immediately over them.

In May, 1849, I dug a circular ditch, a spade deep and wide, about three feet from the trunk of every tree, and filled that with barnyard dung, laying the excavated earth partly over it, and threw the remaining soil around the stem of each tree. An excessively dry summer followed, and no sensible benefit was perceived. A few apples, however, were produced. Last April, I determined to try the virtues of *mulching*; and for that purpose, took several loads of old buckwheat straw and fresh marsh hay, and with a pitchfork, distributed a liberal forkful around the trunk of every tree, making a covering of five or six feet in diameter. The effect was, as you observed; and although the summer was nearly as dry as the year previous, the growth and bearing have been remarkable. Several times during the driest weather, when the adjoining earth was parched and cracked, I lifted the mulch and found the earth beneath, cool, soft, and moist; and in addition to this benefit, it keeps down every weed and sucker from the roots.

So decidedly serviceable have I found this proof, that I have prepared materials for mulching all the fruit trees on the farm next year, some four or five thousand in number, of all kinds, in plowed land as well as in grass, satisfied that in no other way can they be so rapidly and cheaply cultivated. For this purpose, scarcely any decomposable vegetation comes amiss. Straw of all kinds, chip manure, spent tanner's bark, hundreds of loads of which are left to decay about the tanneries, rotten wood, leaves of trees, &c., all are useful, both in giv-

ing shade and protection to the ground, as well as in their decomposition, furnishing the required food for the most succulent and thrifty growth of the tree. To all or any of these, in an old, worn-out soil, a dressing of lime and ashes. These articles, together with phosphate of lime, (bones,) furnish the principal ingredients of the apple and pear, and a large per-centage of the wood of other fruit trees, as well as being those constituents of the soil most rapidly drawn out by excessive cropping. By this plain and simple process, I have little doubt, orchards can be well grown when in permanent grass, and the destruction avoided, so constantly occurring in plowed lands by the carelessness of plowmen, who all bear deadly hatred to a tree, particularly if a small one. The mulching, however, should be extended in area somewhat every year, to cover the increasing roots as they spread; and with such treatment, a plowing once in five or six years is all that will be necessary, if such process be required to incorporate manure into the soil at large.

L. F. ALLEN.

Black Rock, N. Y., Jan., 1851.

IRISH CATTLE.

FROM an exceedingly interesting treatise on cattle about to be published by C. M. Saxton, we make the following extract on Irish cattle, which will enable our readers to judge, in a measure, of the character of the work. It is edited by Mr. A. Stevens, of this city, whose reputation as an importer and breeder of stock is too well known to require any further comment of ours.

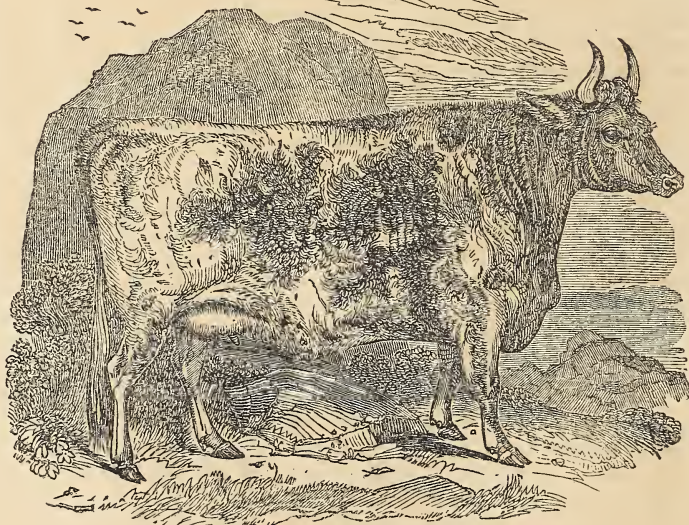
The Irish cattle are evidently composed of two distinct breeds; the middle and the longhorns.

The middlehorns are plainly an aboriginal breed. They are found on the mountains and rude parts of the country, in almost every district. They are small, light, active, and wild. The head is small, although there are exceptions to this in various parts; and so numerous, indeed, are these exceptions, that some describe the native Irish cattle as having thick heads

and necks; the horns are short, compared with the other breed, all of them fine, some of them rather upright, and frequently, after projecting forward, then turning backward. Although they are high-boned, and wide over the hips, yet the bone generally is not heavy. The hair is coarse and long; they are black brindle, and black or brindle, with white faces. Some are finer in the bone, and finer in the neck, with a good eye and sharp muzzle, and great activity.

They are exceedingly hardy; they live through the winter, and sometimes fatten on their native mountains and moors; and when removed to a better climate and soil, they fatten with all the rapidity of the aboriginal cattle of the Highlands and Wales. They are generally very good milkers, and many of them are excellent. The cow of Kerry, a portrait of which is here presented, is a favorable specimen of them.

The cow of Kerry is truly a poor man's cow, living everywhere hardy, yielding, for her size, abundance of milk of a good quality, and fattening rapidly when required. The slightest



KERRY COW.—FIG. 15.

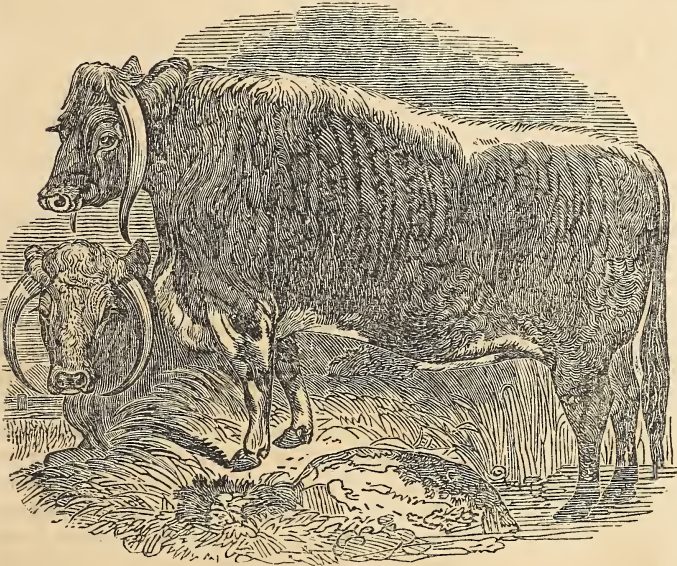
inspection of the cut will convince the reader of the difference between this breed, and both the larger and the smaller longhorned Irish one.

These cattle usually are small, and are confined to the hilly and moor grounds. Some are of considerable size, elsewhere, and are improved in form as well as in weight. The horns are usually of middle length, turn up, as do the

horns of those on the mountains; they are shorter in the leg, shorter in the body; their loins and haunches are heavy and wide; although the hair is thick, the hide mellow, and they thrive with rapidity.

This breed is now not to be met with pure, except in the mountains, being nearly worn out elsewhere by the repeated crosses with the Leicester, Hereford, and Devon; but for the dairy, all the farmers still prefer those cows with most of the native Irish blood.

The other breed is of a larger size. It is the old or partially-improved Craven or Lancashire beast. It is the true longhorn; the horns first taking a direction outward, then forming a curve, and returning towards the face, sometimes threatening to pierce the bones of the nose at other times, so to cross before the muzzle that the animal is unable to graze.



IRISH LONGHORNED CATTLE.—FIG. 15.

The adjoining cut represents the large variety of Irish cattle, and is evidently identical with the Craven or Lancashire. In Tipperary, Limerick, Meath, a great part of Munster, and particularly in Roscommon, many of these cattle are found, which are most valuable animals.

Whence these longhorns originally came, is a question. There is no doubt that they very much resemble the English longhorns, and have been materially improved by them; but whether Ireland or England was the native country of this breed will never be determined. Ancient records are silent on the subject; and in both countries we can trace the longhorns to a

very remote period. Many persons have concluded that the English longhorns sprang from some of the imported Irish ones. Others, however, with more reason, finding the middlehorns in every mountainous and unfrequented part of the country, and the longhorns inhabiting the lower and more thickly-inhabited districts, regard the middlehorns as the pure native breed, and the longhorns to have been a stranger race, and introduced, probably, from Lancashire; where a breed of cattle of the same character and form is found.

ORCHARDING.

Raising Fruit Trees from Cuttings.—Cut a scion of the last year's growth from the tree early in spring, and divide it into lengths of three or four inches each; dip the ends in rosin or grafting wax; plant the pieces in good orchard soil, first putting a little clean sand around them, and a shoot will start from each bud. Select the most thrifty for your standard, and lop down and cover the others with sand and earth to form roots. Out-door culture, at the south, will produce trees in this way, two years sooner than from seeds, particularly from apples, pears, and quinces. Roses and many other garden shrubs are propagated in the same way. At the north, artificial heat and moisture may be required.

Planting a Nursery.—Select a deep, rich soil and manure with decayed wood and leaves; plow deep, at least fifteen inches, and see the ground well drained. Plant the rows north and south, six feet apart; cultivate between the rows for two or three years, some hoed crops, as potatoes, carrots, bush beans, &c., and be sure to keep the young trees clear of weeds. Stone fruits always grow with more certainty, if planted while the seeds are moist, or with the meat adhering.

When the trees are one or two feet high, run a sharp chisel under and cut the tap roots; this facilitates removal when ready to set in the orchard, and enables the operator to do the work with less danger of injuring the roots—a very important matter, which is too much neglected.

Resetting Trees.—Be careful to place the trees just as they stood in the nursery, and do not cut away all the roots and tops. If your land is dry or not inclined to heave by frost, set out your trees in autumn; otherwise, in spring, as soon as the ground is free from frost, or sufficiently dry. Cover the earth with straw, chips, swingletoe, hemp shives, nine straw, to keep it

structure that have not the advantage of this protection, all has gone to utter decay; where the ivy has thrown its preserving mantle, everything is comparatively perfect and fresh, and oftentimes the very angles of the sculptured stone are found to be almost as sharp and as when they came from the hand of the builder.

Pruning.—Commence the first season after setting your trees and go over them regularly every year, and your work will always be light. The best time for pruning is when the sap is circulating most freely. Commence early to form a round head, for that is the most beautiful as well as the most productive shape, particularly for apple trees. It is the practice of some orchardists to prune mature trees when in blossom; our own experience in this matter with peach trees, is in favor of such pruning. Large wounds, made by pruning or accident, should be covered with grafting wax. Fruit buds upon apple and pear trees are usually upon short, stout shoots, upon the sides of branches, two or more years old, though we sometimes see them upon the very ends of shoots one year old.

The quince fruit buds are usually upon the ends of spurs. The fruit buds of peaches, apricots, and nectarines are almost exclusively found upon shoots of the previous season's growth; and care should be taken in pruning, not to remove too many of these. The same shoots rarely produce but once.

To Prevent Mice from Injuring Young Trees.—Remove all the weeds, leaves, or trash from around the bole, and when snow falls to any considerable depth, tread them down firmly for the space of a foot or two, and they will form an effective protection.

IVY ON BUILDINGS.

It is a mistaken idea that ivy renders a structure damp, and hastens its decay. On the contrary, nothing so effectually keeps the building dry, as may be seen by examining beneath the ivy after rain, when it will be found that the walls are dry, though everything around is deluged with wet. Its exuberant and web-like roots, issuing as they do from every portion of the branches, and running all over the surface on which it grows, bind everything together that comes within their reach with such a firm and intricate lace work, that not a single stone can be removed from its position without first tearing away its protecting safeguard. In proof of this, we refer to ruins of ancient castles and buildings; for, while in those parts of the

TO PREVENT MOTHS GETTING UNDER HIVES.

POUND a handful of peach leaves and salt them well and strew them over the bench under the hive. In two or three days, repeat the operation. The flavor of peach leaves is offensive to the moth, but not to the bees.

Another Remedy.—Raise the hive about an inch upon four little pebbles. Take a piece of half-inch pine board from three to six inches wide and a foot long; cut one side full of creases about a quarter of an inch deep; lay this creased side down under the hive and you will find all the millers will use it to raise their broods under; because it is a secure place from the bees, but not from the bee keeper. If he chooses to watch and kill, he will finally destroy the larvæ and save his honey.

CONNECTICUT FARMING.

YOUR paper, as I believe, has been the instrument of raising a spirit of inquiry and improvement among the farmers in Old Connecticut. No intelligent person can read it without finding many valuable suggestions. Science is throwing new light on most of our operations. We find even in our stony and gravelly part of the state, that deep plowing and thorough tillage are of great advantage. On a thin soil, with deep plowing and very little manure, we are able to grow large crops of buckwheat and corn.

Beautiful dwellings, with good barns and stables for cattle, are usually found on most farms. Sleek and beautiful, well-trained oxen, good horses, fine, fat sheep and swine you will find among us. Our young men are contented to stay at home and improve their native soil, instead of seeking their fortunes in the "land flowing with milk and honey" at the west. We take pride in rolling up those stone walls that seem so unsightly to some; and nothing looks finer to us than a good stone wall, built just to get the stone out of our way, and make a substantial fence.

D. S. P.

Woodbury, Ct., Jan., 1851.

TO CURE A RING WORM.—Heat an iron shovel red hot, and put some grains of Indian corn upon it, and press them hard with a cold flat iron, and then iron the part affected.

THE TRAVELLER.—No. 4.

Journey from New York to Florida.—A few notes of this journey may be interesting to readers. December 11th, I left New York on that excellent boat, the John Potter, which leaves the wharf nearest the Battery on the North River, every day at noon, and arrives at South Amboy, 30 miles, in an hour and three quarters. It takes less than fifteen minutes to transfer a load of passengers and baggage to the railroad, and in four hours and a half, I travelled with great ease the 96 miles between New York and Philadelphia. This is an excellent road, and is well furnished with first-class engines, cars, and conductors. Fare \$3. I have heretofore spoken of the beneficial effects of this road to the agriculture of New Jersey.

December 12th, I left Philadelphia at 3 o'clock by express train for Baltimore. The distance, time, and price, is about the same as between New York and Philadelphia. Between Philadelphia and Wilmington, 30 miles, the road passes over a very valuable agricultural district, much of which being owned in England, is but poorly improved by the tenantry. A few miles after leaving Wilmington, the road penetrates a tract of country either naturally poor or made so by poor cultivation. The Susquehannah is crossed by a ferry at the old town of Havre de Grace, and from thence to Baltimore the land is much of it flat, wet, cold, unproductive, and uncultivated; yet all this might be warmed into productiveness by a better system of cultivation; but this will never be while land is of so little value as at present throughout this vast country.

December 13th, I proceeded to Washington, 40 miles. Fare \$1.80, with only two or three little spots like an oasis in a desert, to relieve the eye from the painful contemplation of a worn-out country—once fertile. The wire fence erected by Col. Capron along this railroad, at Laurel Factory, still draws the attention of every observing passenger. It fulfills all the purposes anticipated in the description given in vol. 7 of the *Agriculturist*. I believe it is the only principle upon which wire fences can be erected to give satisfaction. It stands firm through all the variations of the seasons.

The land within sight of the dome of the American capitol is about as unpromising to the eye as it is to the cultivator. It looks poor, is poor, and cultivated poorer; yet wherever the experiment of deep plowing, draining, and manuring has been tried upon this unpromising soil, it affords profitable returns. For a market gardener, no place offers greater inducements,

than the vicinity of Washington. Commodore Jones, who has a farm a few miles up the Potomac, told me that, when he commenced operations there, a few years since, it was the universal opinion of his neighbors, that he could not raise grass. But he commenced a new system with a new set of plows procured from you, turning over a deep furrow and following with a subsoil plow, the first one ever used in that vicinity, and by the use of the first lime, plaster, guano, and bone dust, together with all the manure that could be saved or manufactured, he soon had good fields of grass for hay or pasturage. Subsoil plowing not only saves land from suffering by drouth, but is almost invaluable in preventing the soil from washing away and forming deep gulleys. At first, his neighbors were very shy about experimenting with any of these fertilisers. Now, it is not unusual for one man to expend \$500 for such substances, and make a large profit, too, upon the outlay.

December 17th, I passed from Washington to Richmond, 133 miles. Fare \$5. The boat leaves there at 9 o'clock, stopping at Alexandria, about 10 o'clock, passes Mt. Vernon, the resting place of him who said—“*Agriculture is the most healthy, the most useful, and the most noble employment of man.*” It arrives at Acquia Creek, 55 miles, about one. Here we take good cars upon a railroad, which, after struggling through many difficulties, is now in very good condition; and if the owners of the lands along side of it only understood their interest, they would make it the means of improving large tracts, that now pain the eye with their barrenness. The advantages of railroads to agriculture seem to be as yet but little understood. The time will come when these worn-out fields will be whitened with lime brought over this road, the product of which will furnish constant employment to the freight trains, in transporting it to market. The soil is exhausted upon the surface, but the land is not “worn out.” By means of the railroad, fertilisers will improve and render much that now looks bleak and desolate, desirable for a new class of cultivators. The greatest difficulty with the present owners is, they own too much. This and the fertility of new lands in the west are the causes of so much worn-out soil in the old states. It is more immediately profitable to cut down and destroy the forest and virgin soil, than it is to save or renovate the old fields. But who would always live a border life, half civilised and half savage for the mere love of cash accumulation? But this condition of things will continue, until the west is filled up, or until our

government and people by a course of education, shall disprove that foolish falacious doctrine—*there is no science in agriculture.*

Fifteen miles from the Potomac, we pass the town of Fredericksburg; from thence to Richmond, 63 miles, there is no town nor village of any consideration, and but few well-improved looking farms in sight. The cheapness of land, healthiness of the country, and convenience of the road, I should think, offer great inducements to immigrants from the north. The president of the road, a worthy branch of the old Virginia family of Robinsons, told me the company would transport lime at a very low rate for the purposes of improvement.

December 18th was a clear lovely day at Richmond, and the fact that stores kept open doors and small fires, will show my northern readers a contrast to their own condition upon the same day.

Left this evening at 6½ o'clock upon the Petersburg Railroad, which is now in excellent condition, and of much importance to travellers—it would be more pleasant if it connected by cars instead of stages, with the road at Richmond and Petersburg. The length is 22 miles. Fare \$1. Passengers take supper at Petersburg, and continue their journey at 9 o'clock to Weldon, 63 miles—five hours. Fare \$3. Thence to Wilmington, 160 miles, eleven hours. Fare \$5. Having driven over the same route several times, I am able to speak of it in a manner I could not do by a mere night passage. Some twenty miles south, the land is very level, sandy surface with clay subsoil, which holds the water and gives the country an appearance of sterility to which it is not entitled. These lands, if well drained and manured, and set in grass, would give more profitable returns than any corn farm in the state. I understand some New-Jersey farmers are already developing their value. This railroad also offers great facilities to farmers both to improve their land by lime and in transporting produce to market. Travellers who grumble at the bad condition of the road would not do so if they knew what difficulties the company have had to encounter, and how poorly as yet they have been paid. Passengers for Raleigh leave this train about midnight, right in the woods; and those for Wilmington have to change cars at Weldon at 2 or 3 o'clock, in the open air, which, although a serious inconvenience, is far better than the old mode of staging.

Weldon is an inconsiderable village on the Roanoke, and there is one other upon the road between there and Petersburg; but from Wel-

don to Wilmington, there is scarcely a place of importance enough to bear that title. Nearly the whole length of this road is now in admirable order; and when it is considered that it has been built by the persevering industry and energy of the small town of Wilmington, through an almost entire wilderness, I am disposed to give them a tribute of high praise for the great work they have done.

From Goldsboro' to Wilmington, nearly the whole produce of the country is turpentine. What a curious appearance to a stranger is presented by pines upon a turpentine place. The white sides of the trees look like so many marble monuments, when seen by a dim light through the dark forest. Forty miles of this part of the road is level and straight—the land is poor, surface water in a wet time nearly covering the whole vast extent.

Wilmington is the great emporium of America for pitch-pine lumber and turpentine. It is situated upon the side of a very sandy hill, 30 miles above the mouth of Cape-Fear River. Here we take steamers for Charleston, 180 miles. Fare \$5—time 17 hours. There are some valuable rice plantations upon this river. Dr. Hill, whom I chanced to meet on the steamer going down to his plantation, told me he made 70 bushels to the acre last season, and has made 90. A railroad is now building to connect the Wilmington road with the South-Carolina roads, in order to avoid the unpleasant sea voyage to Charleston.

I arrived at Charleston December 20th—perfect balmy May morning—think of that ye men of frost and snow and December storms!

Charleston Market.—December 21st., I have just returned from viewing the abundance of green vegetables, flowers and spring-like productions for sale, and now sit writing at an open window, enjoying the luxury of such delicious weather in winter. How unfortunate it does not continue throughout the year; but the difficulties, connected with summer in South Carolina, are equal to those in winter to the inhabitants of Canada and Vermont; perhaps more so, for health is more affected. How much every one should study contentment with his own lot, striving more to improve his situation than to change it.

Small Corn Crops.—In a visit to John's Island, I find much of the corn planted last spring did not produce over five bushels to the acre. What a difference between this and the premium crops of Kentucky, 190 bushels to the acre! Sweet potatoes did not average probably over 50

bushels to the acre, some planters barely making seed. This was owing to the drouth that almost desolated many places.

SOLON ROBINSON.

Charleston, December 25th, 1850.

PREPARATION OF BONES FOR MANURE.

THERE is great economy in reducing bones to as fine a condition as possible before applying them to the field. If added in their unprepared state, they will yield a portion of their substance to the crops; but 100 bushels will produce no more effect for a single season, when thus applied, than perhaps 5 or 6 bushels, when finely divided. If the 100 bushels, then, be ground or decomposed, and applied to 20 acres, we shall have an equal amount of benefit accruing to each in a single season, that would be otherwise derived to the land for 20 successive years, if applied unground on a single acre. There are five modes of preparing bones, namely, grinding, burning, steaming, dissolving with sulphuric acid, and fermentation.

Grinding is an expensive mode of reducing bones. Large and fresh bones are so hard and tough, that immense power is required for breaking and reducing them sufficiently for agricultural purposes. Costly mills of great strength and requiring considerable motive power are necessary. Such an outlay can only be justified where a large quantity of bones are to be prepared. There are no small machines within our knowledge, adequate to the objects and adapted to the use of the small farmer. We cannot, therefore, advise a resort to this mode. Unless a mill is erected by some individual or company to grind for a neighborhood, or for a more distant market, we would advise the adoption of some one of the other modes of preparation.

Burning the bones is an economical and summary mode of preparation, but is attended with the certain loss of much of their valuable properties; the albuminous or nitrogenised, and the oily or fatty matters, amounting to about one third of the total of fresh bone. These matters are all useful as manure; but with the exception of the nitrogen, are not essential to be applied to the land. About two thirds of the bone, the earthy portion, remain after burning. This consists of about 80 per cent. of phosphate of lime; 16 per cent. of carbonate of lime; 2 or 3 per cent. of phosphate of magnesia, and nearly equal proportions of soda and common salt. All these are indispensable to vegetable growth, and unless the soil is previously saturated with them, they cannot fail of adding greatly to the

crops. The bones, by this process, are reduced to their finest condition, and thus readily yield their substance to the roots.

Steaming bones has lately been adopted as a system in preparing them for the agriculturist. This is done by using a strong boiler with a false bottom inside, on which the bones are placed. Water is then added so as partially to cover the bones and when converted into steam, it completely envelopes them, for 24 hours, at a pressure of 24 lbs. to the square inch, when they are reduced to an unresisting mass. We subjoin some particulars of this process from the London Farmers' Herald.

The boiler is circular, 6 feet long, and measures 3 feet 4 inches in diameter. It is constructed of the ordinary boiler plate, of $\frac{1}{4}$ inch thick. In the front, the man hole, or door, is placed, 9 inches from the bottom, and $13\frac{1}{2}$ from the top, and $12\frac{1}{2}$ inches from each side. The man hole is closed by a plate door, secured by wedges and screw bolts in the usual manner, upon a jointing of hempen gasket. Inside the boiler, a straight false bottom of sheet iron, on which the bones are placed, is fixed immediately below the man hole. Close upon the bottom of the boiler, a stop cock is placed, for the purpose of drawing off the liquid at the conclusion of the process, if necessary. On a level with the false bottom, is placed a gauge cock, to show whether the water has risen or fallen to that level; about 10 inches above, a second or steam cock is fixed. A safety valve on the top of the boiler indicates the pressure of the steam, and secures the boiler from explosion. The water for steaming the bones is filled by a water cock at the top of the boiler. An extra steam cock is likewise placed at the top of the boiler, for the purpose of supplying steam for any other operation, as for steaming food, &c., when required. The boiler is set in mason work and lined with fire bricks, the length of the mason work being, 7 ft. 2 in. and 5 ft. 5 in. in height, the sides spreading out 13 inches from the boiler. The smoke of the fire passes off directly through the chimney, which is more than 15 feet in height.

Early in the morning, the boiler is filled with bones, through the man hole, and the door of the same is then fastened steam tight. To secure this, the gasket of hemp, which lies between the two metal surfaces of the boiler and the door, is smeared with a luting, made by moistening oatmeal with boiling water, and working it by the hand into a stiff paste; the door is then replaced and screwed tight. This luting, which perhaps may just as well be made of common flour, answers perfectly the purpose, and is

much better than white or read led, made into a paste with boiled linsced oil.

The water for generating steam is filled in the boiler to the depth of 12 inches from the bottom, and as the space between the true bottom of the boiler and the slip bottom, on which the bones rest, is 9 inches, the water rises about 3 inches amongst the bones. From the time of kindling the fire, it takes about one hour to get up the steam. During 24 hours, the steam is kept as uniformly as possible at a pressure of 25 lbs. to a square inch, a boiling during 22 hours having previously been tried, but found insufficient for reducing afterwards the bones to powder with ease. As no water can escape in the form of steam during the boiling, one filling is sufficient. Before the withdrawing of the charge, the fire is removed, the steam let off through the safety valve, and about 3 bucketsful of the watery liquid, equivalent to 7½ gallons, drawn off, in order to reduce the water to a little below the false bottom, on which the bones rest. The man hole is then unscrewed, and the whole allowed to cool down for a little while. While still warm, the contents of the boiler are shovelled out successively by one man who is assisted by another, in crushing the bones, by means of a wooden mallet. The reducing to powder is rendered so easy by this process, that it requires no longer time for crushing the bones than for taking them out of the boiler as fast as they are shovelled out as soon they are mashed into a rough powder by the second man. It is necessary to bring the bones under the action of the wooden mallet, in successive portions when still warm; for when allowed to become cool, they require a greater effort to bring them to powder. The steamed bones treated in this manner contain much water, absorbed in the boiler; thrown into a heap, while yet warm, they not only retain their original heat, but in a very short time the temperature of the heap increases very considerably, and at the same time a most disagreeable smell of putrefying animal matter is given off. The fermentation of the bones, however, which is the cause of this, and consequently the loss of ammonia, may be prevented entirely by adding a small dose of common salt to the steam boxes. Nearly 1,100 lbs. of bones are thus prepared at one time, by the use of a boiler of the forenamed size, and at a cost for fuel, where peat or anthracite coal are used, scarcely amounting to 50 cents. This process requires less fuel than burning, and it has this further advantage: that not a particle of the substance of bone is wasted.

Dissolving with Sulphuric Acid requires that the bones be first partially broken up, then thrown into tubs or casks and saturated with diluted sulphuric acid, as before detailed in our columns.

Decomposition by Fermentation is the last process we shall mention. If fresh bones are thrown into compact heaps and mixed with moist sandy loam and ashes, they will gradually become heated and decomposed. The result will be materially hastened, by occasionally sprinkling with urine, and especially by mixing with horse manure. If the bones have been deprived of their animal matter, they will not ferment. The presence of nitrogen is essential to induce and carry forward fermentation, and this is only found in the anamalsed matter of the bones. During the decomposition of bones, putrefactive odors are given off, which occasion a loss to the manure heap, while they are an insufferable annoyance to the olfactories. This objection, however, may, in a good degree, be remedied, by covering the heap with rich decayed turf, peat, plaster, charcoal, or any other absorbents.

The value of bones for agriculture may be inferred from the fact, that nearly 33,000 tons were imported into England in 1848. The value of bones used for agricultural purposes in that country, annually, is estimated at about \$4,400,000. In the United States, they are fast becoming appreciated, and it will not be long before every bone in this country will be carefully husbanded, and applied to the augmentation of our crops.

FAIR OF THE WASHINGTON-COUNTY AGRICULTURAL SOCIETY.

The Washington-county Agriculture Fair, held at Argyle Corner, September 18th and 19th, 1850, all things considered, was a respectable exhibition. The society has no purchased grounds, consequently no buildings relieve its members from the necessity of making charge for and handing out admission tickets—all free except those who enter as competitors for premiums. There were exhibited the best horses, taking them altogether, I have seen this season. They were all fine, studs, geldings, brood mares, colts, &c. The Black-hawk breed here stands A, No. 1.

The exhibition of horned cattle was creditable to the owners. A fine team of oxen, some nine pairs long, was exhibited by the neighboring farmers, drawing a wagon 30 feet long or more, loaded with a great variety of the products of

a farm, together with an assortment of farming implements. The Durham stock was well represented, also the Devonshires. The Durhams are here generally preferred. Notwithstanding the objections of some of my New-Jersey friends to the Durhams, I think I would be satisfied with owning as good cows as were shown at this fair.

No great variety of farming implements was exhibited; some well-finished fanning mills, some polished plows, Tanlin's horse-drawn mowing machine, and some splendid carriages, harnesses, a team wagon or two, being the principal.

The display of quilts, specimens of needle work, &c., were as good as circumstances would allow. For the exhibition of flowers, fruits, &c., there was no other covering than a canvas tent and that was quite too small. A painting, representing a snow storm, executed by a lady of Washington county, attracted general attention. This was so strikingly natural that the beholder would involuntarily draw his coat closely around his person to repel the violence of the chilling scenes.

The second day of the fair was quite rainy; and oh! what quantities of clay mud. Notwithstanding the unfavorableness of the weather, the attendance evinced a determination to excel.

Another year will probably find the society in possession of grounds and permanent buildings, and it is to be hoped, ample accommodation for visitors.

ALONZO SHERMAN.

NOTES FROM A KITCHEN GARDENER'S MEMORANDUM BOOK.—No. 2.

Lima Beans.—Owing to the frequent cold rains during the early part of May, my first and second planting rotted; and as the weather at this period of the year is so undetermined, the gardener is always subject to disappointment by planting in the open ground; and where a few only are required for private table use, I am of opinion it is best to forward this choice esculent and tender plant in pots, placed in frames, which plan I intend for the future to adopt; and not being confined to a single enclosure, I have determined not to plant them in the garden, as they occupy much room, and the poles, before they are covered with the vines, are unsightly.

Bush Beans.—As the kitchen garden can hardly be said to be complete without some of this variety, I usually plant a few, endeavoring to get them in sufficiently early to have them cleared off in season for putting out late broccoli. Their cultivation is simple; planted in drills,

kept free from weeds, and in growing condition by frequent hoeing, occasionally drawing the earth up to their stems.

Windsor Beans.—In England, this bean is extensively cultivated and highly prized as a culinary vegetable. With us, and I think justly so, it is thought to be far inferior to the Lima bean; and not being well adapted to our climate, is but little cultivated. The chief difficulty we have to encounter in its cultivation, is, that the hot sun destroys the blossoms before the pods are formed, leaving the cultivator nothing but a fruitless stalk. In order to prevent this, it is highly important to plant as early in the spring as the ground can be broken, and endeavor to have them forward before the approach of hot weather; and with the view of further prevention, I planted them between the rows of peas, which I usually plant from five to six feet apart, and by the time the beans were in blossom, the peas afforded a partial shade, and I succeeded in obtaining a fair crop. If the value of the fruit were the only object, I would not grow them; but producing a beautiful blossom, and not being common, I will in future cultivate a few, pursuing the same mode of planting. I also planted a few on the 9th of August last, with the view of having them in autumn. They blossomed freely but did not fruit. They are very hardy, and now, the 21st of November, are yet in bloom, seemingly not the slightest affected by the recent frost.

Potatoes.—Of this valuable product, this year, I planted nine varieties, principally imported from Europe, and had the gratification of harvesting all of them in sound condition, excepting the "Mercers" and "western reds," a portion of which were rotten. All were planted at one time in the same locality and received similar treatment. Next year, I intend to plant chiefly the foreign seed I have this year acclimatised. For the last two years, I have succeeded in raising two crops of "early sovereign" potatoes, and about one third of a full crop of "red-topped" turnips from the same piece of ground, in one season. As early in the spring as the condition of the ground will permit, I plant the first crop in drills, three feet apart. From the 1st to the 10th of June, according to the forwardness of the first planting, I put in the second, thus:

First planting.	*	*	*	*	*
Second planting.	*	*	*	*	*
First planting.	*	*	*	*	*
Second planting.	*	*	*	*	*
First planting.	*	*	*	*	*

About two weeks elapsed before they appear above ground, and about a fortnight before they

attain any important size, which brings us into the early part of July, at which time, the first crop is ready to be taken off, leaving the entire space for the second to grow in. Towards the latter part of August, we find between the rows of potatoes, which are planted six inches wider than usual, sufficient room to drill in turnip seed, which, before requiring more room, the second crop of potatoes is at maturity, and which taken off leaves the entire space for the turnips. By this manner of planting, about four weeks are saved, to which, for the success of the experiment, I am indebted.

IMPROVEMENTS IN AGRICULTURE IN MISSOURI.

TWELVE months ago, I do not believe that there were exceeding half a dozen agricultural journals taken in the county in which I live. Now, the subscriptions to the *Agriculturist*, alone, in this county, amount to about sixty, a large majority of that number, too, having been sent to the publisher since the beginning of July, and they are still presenting themselves more freely than they have done at any time heretofore. It is beginning to be taken, too, in the upper, (river,) counties of the state, as also south of here.

A subsoil plow had never been seen here before the arrival of those which you sent last fall to Mr. Hayden and myself. Every intelligent farmer, who has seen their work is much pleased with them, and I am encouraged to hope that many will avail themselves of the advantages which would most surely result from their use. Thanks to your labors, and thanks, too, to the labors of your enlightened correspondents. You are all entitled to the country's gratitude. At any rate, you have mine. It will ever be so. The circulation of well-conducted agricultural journals will bring to the knowledge of farmers new and improved implements and modes of husbandry, which, if adopted, will always better their condition, contribute to their thrift, and enhance their comfort.

I have been at much expense for plows, and yet I can seldom get a good one. I do believe, that if your eagle plows could be fairly introduced here, a great, yes, the greater number of plows with which we have heretofore broken up our lands, would be laid aside as nuisances. I will mention one other improvement which the farmers on the prairies need—a clod crusher. It is the most expeditious and efficient pulveriser I have ever seen, and is also cheap and simple. Still more do farmers on stiff clays

need it. I speak advisedly, because I have one and have used it.

I cannot close without congratulating you, my state, and more especially my country, that the plows now ordered will come into the hands of gentlemen of intelligence and discernment, and gentlemen, too, whose representations will be implicitly relied on wherever they may be made.

URBANE B. OGLESBY.

Boonville, Mo., Jan., 1851.

THE root of madder, (*Rubia tinctoria*), is used for several dyes, but principally for the rich Turkey red; and it has been recently an object of attention in the United States. The introduction of this, with numerous other articles consequent upon the extended growth of our manufactures, shows the intimate and mutually beneficial effects of associating the two leading industrial occupations of agriculture and manufactures. The principal cause which has pre-



MADDER.—FIG. 15.

vented its cultivation among us, thus far, has been the long time required for maturing a crop. Another drawback in its culture, in this country, is the want of suitable mills for breaking and grinding the roots. This may be done immediately after the madder is dried; or it will gather dampness, so as to prevent its grinding freely. Any common gristmill can grind madder properly; and when ground it is fit for use, and may be packed in barrels, like flour, for market.

Mr. Swift, of Ohio, has raised 2,000 barrels per acre in one crop of four years' growth, at a net profit, including all charges of rent, labor, &c., of \$200 per acre. The roots of madder are also a good food for cattle, but the expense and delay of producing it will preclude its use for that purpose in this country.

For the culture of this important plant, see Allen's American Farm Book, pp. 226, 230.

WHAT MIND WILL DO IN AGRICULTURE.

FOR twenty years, John Delafield, Esq., now of the county of Seneca, and recently elected President of the New-York State Agricultural Society, was a leading and successful banker in the city of New York, at the head of one of its largest institutions. Seven or eight years since, he retired to the banks of Seneca Lake, where he had purchased a fine farm, and commenced, without early experience or knowledge in agriculture, the profession of a farmer. Carrying into his new vocation the same energy of action and thought, which had distinguished his career through his active business life, he soon acquired the necessary knowledge for the successful cultivation of his farm; and by his good sense and enterprise, soon won the confidence of the farmers of Seneca, who elected him president of their county society, in which position he effected more for the progress of cultivation among them than any other individual had ever done in that county.

Within the last year, Mr. Delafield made an agricultural survey of the county of Seneca, under the auspices of the state society, probably the most complete in its details of any agricultural survey ever made in the United States. The report accompanying the survey has received full approbation of the society, and is to be published in the forthcoming volume of its transactions. The document is replete with every kind of information in regard to the agriculture of the county, its various statistics, population, pursuits, &c.

The labor of making this survey occupied Mr. Delafield eight months of the year past, and in his bill of expenses, rendered the society, which was only a few hundred dollars, he left it with a committee of that body to fix the wages which he should have for his personal services, stating, that, while absent from home, he had hired one extra man to oversee his farm work, but generously adding that as this might become a precedent for the government of the society in its future county surveys, the committee should fix a moderate rate of compensation for such services. The committee did fix the rate, and allowed Mr. Delafield, (who in past years, at the hands of his board of directors in Wallstreet, received his \$5,000 per annum,) \$14 a month for his labor, and \$6 for his board, besides a proportionably compensatory amount for the use of his horse and carriage while making the survey. This he declared was perfectly satisfactory; and that he felt prouder of the compensation for that labor, than

any which he had ever performed, and as being the most truly useful work of his life!

In this simple transaction, is an example as worthy of record as any transmitted to us in Roman history. Mr. Delafield is now the honored head of our state society, under whose direction we have every confidence that it will achieve new laurels, and add to its already world-wide reputation for usefulness and honor.

New York, January, 1851.

L.

PROTECTION OF SHEEP AGAINST DOGS.

THE destruction of sheep by dogs has for a long time proved a serious evil in several of our neighboring counties. We know that many farmers have been obliged entirely to discontinue the raising of sheep, in consequence of the great insecurity from dogs being allowed to roam at large in their neighborhood. There are no animals more profitable to the farmer than sheep, and it is an abridgment of his rights and an injury to the public that the propagation of sheep must give way to that of dogs. The dog is useful in his place, but that place is his master's own premises; elsewhere, he is a nuisance, and when he becomes dangerous, it is time that the law should interfere.

The present law is incommensurate for the protection of the farmer in his sheep. The tax upon dogs is entirely inadequate to produce anything like a sufficient fund to respond for the damages done by them to sheep, and the county is not interested in its collection because there is no responsibility beyond the amount of the fund. In many towns, there are persons who own several dogs who could not pay for one sheep.

The following petition to the legislature has been prepared, and copies will be left at our office for circulation and signature.

To the Honorable the Legislature of the State of New York:

The petition of the subscribers represents: That they are farmers and desirous of continuing the breeding of sheep, which they deem as profitable stock as any they can have upon their farms. The only difficulty is the destruction of sheep by dogs. These two species of animals cannot exist in the same neighborhood, if the dogs are allowed to roam at large. It is not only the cruel slaughter of the sheep which occasions loss to your petitioners, but flocks, which have once been attacked by the dogs, are rendered unmanageable and comparatively valueless. As dogs are more or less the enemies of sheep, and if some are not of them-

selves inclined to commence the attack, they are liable to be led off by mischievous associates, so that the question must be determined, which of these animals are the most valuable to the public. The comparison cannot be made upon any individual estimate; for one dog will, in a short time, maim and destroy a score of sheep. Your petitioners do not propose to make the same war upon dogs, that the dogs do upon the sheep; but they desire that, by the most stringent enactments, the dogs may be kept always at home, or under the immediate control of their masters. They do, therefore, respectfully ask that a law may be passed charging upon the several counties within the state, all losses that may arise within the same, from the injury or destruction of sheep by dogs, without restriction as to the funds that may be in the treasury from the dog tax, and giving to the several boards of supervisors, throughout the state, the most ample powers to make such laws and regulations with regard to the keeping of dogs, and the tax to be paid for them as will protect the county from loss; and especially providing that the owner of every dog, found at large, in the public highway, or upon any premises other than that belonging to his owner, unless under the immediate control of his owner, or some one of his family or servants, shall be subject to a penalty of \$50 for every offence; and that any person shall have full right to kill any such dogs, found at large, within the town in which he may reside. Your petitioners present herewith the draft of a law to which they respectfully ask the consideration of the legislature.

HORSE SHOEING.

THE following exceedingly sensible remarks are from the pen of Mr. Miles, Veterinary Surgeon to the Queen of England's Life Guards, and author of several valuable veterinary works. We commend them most particularly to the notice of every person who has that valuable, and almost indispensable animal, the horse, in his charge. That class of persons very justly characterised by Surgeon Miles, as "asinine smiths," are invited to give their attention.

The shoes of the horse should be of equal thickness throughout, with a flat ground surface, as those with high heels, which asinine smiths make in imitation of their own, are dangerously absurd. The toe, which ought to be raised, is thus lowered, and nature's plan reversed, which elevates the point in order to avoid obstructions. The web should be wide, and of

the same width throughout, instead of being pinched in, because the Vulcan operator likes to see the shoe well set off at the heels. This is both unphilosophical and detrimental; it deceives the eye of man, and injures the foot of the horse. The *outer* edge of the foot rests on the inner edge of the shoe, and the remaining width of the web projects beyond the hoof; so that the master who thinks his horse has a good open foot, only has to be proud of a bad open shoe, which both conceals deformities underneath, and invites with open arms a bad road to come and do its worst. The heels are made bare just where the navicular joint is most exposed; and if that be inflamed, what must the agony be when the unprotected foot treads on a sharp flint? The horse falls suddenly lame, or drops as if he had been shot—phrases in much too common use to require explanation; and small is the pity which the suffering animal meets with from man, who, having first destroyed the use of his victim's feet, abuses him because he cannot go; and imputes "grogginess" to him as a crime, as if he were in liquor like a groom, and not in agony.

BEST TIME FOR CUTTING HICKORY TIMBER.

PERMIT me to mention a fact in relation to cutting hickory timber for farm or other uses. Three or four years ago, I was told by a very old man, (who is famous for his forks, rakes, &c., made of hickory,) that if I would cut the wood upon the 4th, 5th, and 6th days after the new moon, in August, that he would warrant it not to be destroyed by the worm nor borers. The result for several years has verified the old man's prediction, whilst that cut through the winter and at all other times through the summer, and not barked, (as a trial,) has been eaten throughout. Not being a lunarian, I endeavored to account for its preservation to the old man, by stating that the hickory, at that particular time, was in the chrysalis state, and therefore incapable of depositing the egg, &c.; but this he looks upon as rank heresy.

A VIRGINIA FARMER.

Winchester, Va., Jan., 1851.

WRITERS FOR THE AGRICULTURIST, are requested to make their communications brief and explicit. Goethe says: "The design of language is to give expression to thought; that style of writing, therefore, must necessarily be the best which most rapidly, clearly, and perfectly conveys to the reader's mind what the writer intended he should understand.

Ladies' Department.

TWENTY-NINE years ago, Betty Winal, then residing at Tarlton, bottled a quantity of white currants in their green state, being then in the 33d year of her age. Having kept them some time in a state of preservation, William, (her husband,) and she agreed that they should be kept while they both lived, and that they should be made into pies at the funeral of the one who should die first. The wife departed this life on the 2d of this month, and was interred at St. Peter's Church, Preston, on the 5th—the family having removed to Dawson street, Preston. Their mutual pledge was fulfilled, and the pies made of these currants were served out, after returning from church, every attendant taking a slice. Though the currants had kept twenty-nine years, they were as fresh as if just taken from the trees. Any other fruit may be preserved in the same way by expelling the air and sealing over the cork air-tight.—*Exchange Paper.*

RYE FLOUR, when made into good light bread and allowed a day or two to ripen, is very nutritious and wholesome. Rye flour more nearly resembles wheaten flour in its composition than any other; it has, however, more of certain gummy and sugary substances, which make it tenacious, and also impart a sweetish taste. All grains and roots which have much starch in them undergo a great change in their chemical composition by baking—flour becomes more nutritious, and more easily digestible, because more soluble. This is also the case with flour; that is, the starch, gluten, and sugar of potatoes, when baked, or what is still better, when roasted in the hot embers of an old-fashioned farm-house fire.

DRESS OF ENGLISH WOMEN.—The women of England understand better what is due to propriety in this respect. They may, and do dress gorgeously in their assemblies, in their private parties of fashionable resort; but in the street, they are marked with great plainness of dress. Sober and delicate colors, absence of chains and diamonds, the close-fitting hat, neat mantle, and thick shoe, attest their thorough good sense in the matter. We wish American ladies would copy them in this thing, instead of aping the follies of the frivolous Parisians.

Will the time ever come when a cultivated intellect shall preponderate over dry goods? or a correct and delicate perception of real comfort and beauty, over the absurd and continually-varying fashions of the day?—*Exchange.*

BROWN BREAD *vs.* WHITE.—The reason why brown bread is considered more healthy and more nutritious than when made of superfine flour, is, because the outer portion of the kernel of wheat contains the greatest proportion of oil and gluten; and this is the reason why bran possesses such fattening qualities. The best fine flour contains about seventy pounds of starch to each hundred. The residue of one hundred pounds consists of ten or twelve pounds of gluten, six to eight pounds of sugar and gum, and ten to fourteen pounds of water, and a little oil.

HABITS OF JENNY LIND.—She is remarkably temperate in all things, carefully avoiding stimulants of every description. She is an early riser, bathes every morning regularly, winter and summer; and exercises much in the open air. She always dresses with a view to comfort rather than show, religiously avoiding tight lacing. She partakes freely of the plainest food, using much fruit. She attributes her uniform good health to her temperate mode of living, she seldom having occasion to consult a physician.

GIGOTE, is the name of a Mexican preparation of beef, very useful to travellers in the desert. It is made by drying the jerked meat until it can be finely pulverised, to which is added, as a matter of course, a quantity of powdered pepper pods, and is then packed in bags for the journey. It makes a very good soup or savory stew, particularly with a little addition of wild game. A slice of salt pork gives it a very palatable relish.

TO MAKE FINE HAND OR SHAVING SOAP.—Cut up fine, a bar of good white soap, and moisten it into a paste with sweet oil, and scent it with rose, lemon, musk, or any other sweet-smelling savor you like.

BED BUGS.—There is a long article in the Valley Farmer by which it is established beyond question that sweet oil occasionally rubbed over bedsteads, chair boards, &c., will effectually prevent the appearance of bed bugs. We think it unnecessary to publish the evidence of the efficacy of this cheap and agreeable preventive of the nuisance in question. The reader will take our word that it is conclusive.—*Ex.*

WORTHLESS FURNITURE.—A lazy woman is the most worthless and troublesome piece of household furniture a man can have.

Foreign Agricultural News.

By the arrival of the steamer Canada, we are in receipt of our foreign journals to the 18th of January. The only matter of interest in the markets, is, that cotton has fallen $\frac{1}{4}$ lb.

MARCH OF INTELLECT.—In the 15th century, a cock was burnt alive by order of the magistrates of Basle, in Switzerland, for having laid an egg, the said chanticleer having been convicted of sorcery. Read in the London papers the recent letter of Miss Martineau, on Mesmerism, and the cure of her sick cow, thereby, and you will admit that we must not laugh at the medieval superstitions.

Roots in Drain Pipes.—I once found in a drain, $4\frac{1}{2}$ feet deep, a mass of roots which had completely choked the inch-and-a-half pipe, though laid but 18 months. These roots were from a mangold-wurtzel crop just removed off the land.—*Agricultural Gazette.*

Quantity of Carbonic Acid Borne by Plants.—Plants will bear five per cent. of this air, in addition to what is natural to them; but they then require exposure to very strong light. Probably one or two per cent. is as much as it would be safe to use.

How to Make Cows Calve in the Day Time.—Every one has felt the inconvenience of having his cows calve during the night. In all seasons, but especially in winter, this is exceedingly annoying, and not only demands continual useless watching, on the part of the cow keeper, but also often, indirectly, causes the death of the calf and its mother. Now it has been ascertained by a person living in the neighborhood of Utrecht, that a cow with calf, milked for the last time at night instead of in the morning, calves in the day and not at night. Out of 30 cows on which the experiment was tried, only 3 or 4 are mentioned by M. Numon, Professor of Agriculture at Utrecht, as being exceptions. As confirming the above statement, we may mention the fact, that a large farmer in the Campine has also tried the same plan with success.—*Flore des Serres.*

Animals by Nature Wild.—Speaking of the leveret, it is worthy of remark that this animal being *feræ nature*, is one of the most difficult to tame, permanently, of all creatures. The late Sir John Sebright called on me some years ago, to see my collection of robins, of which he had heard so much; and during a lengthened conversation of great interest to both of us, he put me in possession of many singular facts with respect to animals "by nature wild." To mention only two: Sir John told me he had procured some eggs of the wild duck, and placed them under a domestic hen. They were hatched in due course, fed, and brought up with the other chickens, ducks, &c., in the poultry yard. Still, they gave early signs of the wildness of their nature. They were pinioned, and thus made apparently tame; but when the wing feathers reappeared, the birds one day, on a slight alarm, took flight, and disappeared altogether.

The second instance of natural wildness being in-

domitable, presented itself in the case of some half dozen wild rabbits, taken from the nest soon after they were kindled. Sir John lavished on them much of his attention; tried every means to tame them; all in vain. The animals gave early evidence of the instinct of their nature, and were ultimately let loose to run riot in a warren.—*Gardeners' Chronicle.*

Preservation of Timber.—The Hospitium, at York, consists principally of oak timber, which has never been painted. It is many centuries old, and is sound to this day.

The oak timber employed in old churches for pews, and found in old ruined castles, where it was used for beams, as for example at Stone House, in Herefordshire, and in our most ancient buildings for roofs, has never been painted; all these are many centuries old, and yet they are sound in most cases.

The wooden fence, of rent oak, fixed about 27 years since round the garden of the Horticultural Society, was never painted. The pales are as sound as ever. The only decay is in the posts, where they go into the earth; and there the sap wood is rotten, as usual.

About 28 years since, a slight fence was put up near where we are writing; it was cut out of Lombardy poplar, just felled, and was immediately fixed. After being erected, it was coated well with boiling coal tar, which sunk deeply into the soft wood. That fence was sound for full 20 years, and exists now, though in a decayed condition.

Question 1. Would it have stood at all without tar?

Question 2. Would it have stood longer had it been seasoned before being tarred?—*Agricultural Gazette.*

How to Saturate Peat Charcoal with Ammonia.—A friend of mine has a quantity of it. How shall he treat it so as to get it saturated with ammonia? At present he has some flour barrels, with a few gimlet holes in the bottom, three parts filled with charcoal, into which are poured the urine of the feeding cattle. The liquid after standing for some time in the cask, is drained off, and a fresh quantity poured on. After how long a time, or how many saturations of urine will be sufficient to prepare the charcoal? Is this the best or proper method? Can the charcoal be used for top-dressing for grass or wheat, or is it the best for turnips? I suppose it must be kept from wet. The charcoal has been prepared, and most satisfactorily and cheaply, in a kiln, or furnace rather, used for making small coal into coke; it was burnt for 48 hours, and the peat lost two thirds of its weight, but not very much of its bulk. Should this same charcoal turn out half so valuable as Mr. Jasper Rogers would have people suppose, the farmers in some parts of this district will be able to supply themselves with any quantity, at less than 1s. 6d. per cwt. [The charcoal may be used so long as the liquid coming through it seems purified by the filtration; and that can be ascertained by sight and smell; or by adding acid, which will make old liquor effervesce if it be not well filtered. Charcoal thus treated will be a capital top-dressing for grain crops.]—*Ibid.*

Editors' Table.

O. B. SCOTT, of Pierrepont Manor, Jefferson county, N. Y., is travelling agent for the Agriculturist.

SOLON ROBINSON IN KENTUCKY, TENNESSEE, ARKANSAS, AND MISSOURI.—Mr. R. is under many obligations for the good wishes repeatedly expressed by his kind-hearted friends in the above states, and at the same time assures them, it is his intention to visit them one by one, as soon as circumstances will permit. He has several times already passed through parts of these states, and remembers with gratitude the generous, warm-hearted hospitality that greeted him during his short stay there; and he also well recollects the fertility of the soil, the great natural advantages of the country, the intelligence and enterprise of the people, and the many excellent examples he found there of a high and enlightened culture of extensive farms and plantations. Kentucky is probably the finest stock-raising country in the United States, although parts of Tennessee, Missouri, Illinois, Indiana, and Ohio are becoming strong competitors with her in this department. But there is room and a good market for all. May the spirit of improvement, kindness, and mutual assistance pervade in every American bosom.

DR. M. W. PHILLIPS, OF MISSISSIPPI.—We are pleased to learn from a letter recently received from this distinguished friend of southern agriculture, that, partly from the urgency of his friends, and partially from his own thirst for agricultural knowledge, he is shortly to make an extensive tour in Europe. We shall hope for considerable information on the various topics of agricultural interest from his shrewd observation while abroad.

MISSOURI WINE.—Herman, in Gasconade county, is the chief wine-growing district in Missouri. It is surrounded by luxuriant vineyards, from which there will be produced this year, from 80,000 to 40,000 gallons of wine. The day may come when Missouri will be as distinguished for her grapes and wines, as hemp, tobacco, and other heavier products.

MANUFACTURE OF CASTOR OIL IN SOUTH CAROLINA.—We noticed a shipment of this article last fall, from Charleston. It was manufactured from seed grown in that vicinity, by Mr. C. Alts. The product per acre averaged 30 bushels.

THE TOBACCO BUSINESS.—There are in operation at present time in Richmond, Va., 43 tobacco factories, in which are employed over 2,300 hands, and which produce in manufactured tobacco 14,500,000 lbs. annually.

SNOW BALLS IN HORSES FEET.—It is stated that soft soap, well rubbed into the bottom of the hoofs, when clean, and before the horses leave the stable, will prevent the collection of balls of snow.—*Exchange.*

LOUISIANA SUGAR CULTURE.—A new variety of cane, called the crystalline, has been introduced from Cuba, that appears to possess some better qualities to resist frost than the Bourbon or "red ribbon," which are the two kinds most preferred, though three others—the

"green ribbon," Otaheite and Creole cane are cultivated. The new kind is represented as a large cane, with a tough rind, large firm eyes, juicy, vigorous, and prolific—excellent qualities. The product of sugar last year has been very fair and the cultivation increasing.

THE PROPERTIES OF MAIZE, OR INDIAN CORN.—The fact that starch could be profitably extracted from this great product of America, is a comparatively recent discovery. Yet, it is found to contain almost as great a proportion as wheat. The per-centage of starch in the best varieties of corn, is about 60 per cent.; nitrogenous substances, some 15, with a good portion of sugar and 10 per cent. of oil and gum. No wonder it has such fattening properties, as all practical men are well aware of its great superiority over every other kind of grain for that purpose.

The amount of starch in sweet corn is very small, not over 18 or 20 per cent.; but the per-centage of sugar is very great. The nitrogenous matter about 20, gum 14, and oil, 11 per cent. If it could be made to yield as much per acre as the more hardy kind, it would be the most profitable, because the most nourishing of all the varieties.

THE HALF CENTURY; or a history of changes that have taken place, and events that have transpired, chiefly in the United States, between 1800 and 1850, with an introduction by Mark Hopkins, D. D. By Emerson Davis, D. D. Boston: Tappan & Whittemore. The half century that is now just completed, has been, on many accounts, the most remarkable the world has ever known. The progress of liberty, education, and religion has been very great. Intellectual and moral culture and the arts of civilised life have received a new impulse. The author has performed a good service to the country, in presenting this condensed view of those great events and changes which have taken place in our social condition. The volume will prove highly useful. It contains 444 pages, and is sold for \$1.25.

THE GREAT METROPOLIS; or New York Almanac for 1851. Price, 25 cents. New York; H. Wilson.

A WINTER IN MADERIA AND A SUMMER IN SPAIN AND FLORENCE. 12mo., pp. 380. Price \$1. Wm. H. dredge. The book might with propriety be called the panorama of Madeira; for it gives the reader as correct, an idea of the places visited, and the manners and customs of the people as if painted on canvass, or he were present and saw them. The author's son has shown himself equally skillful in the beautiful sketches of the house of Columbus, Funchal, Galileo's Tower, &c.

THE NIGHT SIDE OF NATURE; or Ghosts and Ghost seers. By Catherine Crowe. In one volume, 12mo., pp. 450. Price, \$1.25. New York: J. S. Redfield. The object of this book seems to be to suggest inquiry and stimulate observation in order that we may endeavor, if possible, to discover something regarding our physical nature, as it exists here in the flesh; and as it exists hereafter, out of it. We see the book has already passed through several editions within a few months.

Review of the Market.

PRICES CURRENT IN NEW YORK, FEBRUARY 13, 1851.

ASHES, Pot,	100 lbs.	\$5.50	@	\$5.62
Pearl,	do.	5.62	"	5.69
BALE ROPE,	lb.	9	"	11
BARK, Queiroton,	ton.	33.00	"	35.00
BEANS, White,	bushel.	75	"	1.50
BEESEWAX, American, Yellow,	lb.	20	"	26
BOLT ROPE,	"	10	"	11
BONES, Ground,	bushel.	45	"	55
BRISTLES, American,	lb.	25	"	65
BUTTER, Table,	"	15	"	25
Shipping,	"	9	"	15
CANDLES, Mould, Tallow,	"	10	"	13
Sperm,	"	25	"	50
Stearine,	"	25	"	30
CHEESE,	"	5	"	10
COAL, Anthracite,	2,000 lbs.	6.50	"	7.00
CORDAGE, American,	lb.	11	"	13
COTTON,	"	12	"	16
COTTON BAGGING, Am. hemp,	yard.	15	"	16
FEATHERS,	lb.	27	"	40
FLAX, American,	"	8	"	9
FLOUR, Sour,	bbl.	3.62	"	4.12
Ordinary,	"	4.18	"	5.00
Fancy,	"	5.25	"	6.75
Buckwheat,	"	—	"	—
Rye,	"	3.87	"	4.00
GRAIN—Wheat, Western,	bushel.	1.00	"	1.20
Red and Mixed,	"	90	"	1.10
Rye,	"	75	"	80
Corn, Northern,	"	69	"	74
Southern,	"	68	"	72
Barley,	"	95	"	1.00
Oats,	"	48	"	53
GUANO, Peruvian,	2,000 lbs.	47.50	"	50.00
Patagonian,	do.	—	"	40.00
HAY, in Bales,	100 lbs.	70	"	75
HEMP, Russia, Clean,	ton.	220.00	"	225.00
American, Water-rotted,	"	160.00	"	200.00
Dew-rotted,	"	140.00	"	175.00
HIDES, Southern, Dry,	"	10	"	11½
HOPS,	lb.	6	"	35
HORNS,	100.	2.00	"	10.00
LEAD, Pig,	100 lbs.	4.95	"	5.00
Pipes for Pumps, &c.,	lb.	5	"	7
LARD,	lb.	7	"	8½
MEAL, Corn,	bbl.	3.00	"	3.37
MOLASSES, New-Orleans,	gallon.	29	"	31
MUSTARD, American,	lb.	7	"	10
NAVAL STORES—Tar,	bbl.	1.75	"	2.00
Pitch,	"	1.25	"	1.75
Rosin,	"	1.25	"	1.40
Turpentine,	"	2.44	"	2.57
Spirits of Turpentine,	gallon.	36	"	35
OIL, Linseed, American,	"	90	"	95
Castor,	"	1.05	"	1.15
Lard,	"	65	"	75
OIL CAKE,	100 lbs.	1.25	"	1.50
PEAS, Field,	bushel.	75	"	1.50
Black-eyed,	"	1.75	"	2.20
PLASTER OF PARIS,	ton.	2.00	"	2.75
Ground, in Barrels of 300 lbs.,	"	1.12	"	1.25
PROVISIONS—Beef, Mess,	100 lbs.	8.00	"	11.00
Prime,	bbl.	4.00	"	6.00
Smoked,	lb.	6	"	12
Rounds, in Pickle,	"	4	"	6
Pork, Mess,	100 lbs.	10.00	"	12.50
Prime,	bbl.	6.50	"	9.50
Bacon Sides, Smoked,	"	3	"	4½
in Pickle,	"	3	"	4
Hams, Smoked,	"	5	"	9
Pickled,	"	4	"	7
Shoulders, Smoked,	"	4	"	6
Pickled,	"	3	"	5
RICE,	100 lbs.	3.00	"	3.56
SALT,	sack.	1.00	"	1.60
Common,	bushel.	20	"	35
SEEDS—Clover,	lb.	6½	"	9
Timothy,	bushel.	2.00	"	4.00
Flax, Rough,	"	1.80	"	1.85
SODA, Ash, (80 per cent. soda),	lb.	3	"	—
Sulphate Soda, Ground,	"	1	"	—
SUGAR, New-Orleans,	"	5	"	8
SUMACH, American,	ton.	35.00	"	37.00
TALLOW,	lb.	7	"	8
TOBACCO,	"	4	"	15
Eastern, Seed-leaf,	"	15	"	20
Florida Wrappers,	"	15	"	26
WHISKEY, American,	gallon.	25	"	26
WOOLS, Saxony,	lb.	50	"	60
Merino,	"	40	"	50
Grade Merino,	"	30	"	40
Common,	"	20	"	30

REMARKS.—Prices steady, with a downward tendency in flour and cotton.

The Weather still continues mild, with the exception of a few cold days. We have had scarcely three inches of snow fall thus far during the winter.

TO CORRESPONDENTS.—Communications have been received from Levi Bartlett, Coke, J. O., E. Emmons, A. G. Mathews, B. Webster, W. B. W. Gray, T. S. G., Visitor, F. A. Hallock, Octogenario, T. W. Harris, Augustus, A Member of an Agricultural Society, Joseph Tognio, J. R. Strale, H. N. W. and on the Study of Entomology, no signature.

VILLAGE LECTURES.—When we commenced the publication of these lectures, we gave full credit to the source from whence we took them, the Agricultural Gazette, published in London, England. We directed credit to be given in addition to this, regularly, in every number of our paper; but, much to our regret it was accidentally omitted in January and February.

GREAT SALE OF SHORTHORNS.—We beg to call attention to Mr. Vail's advertisement of shorthorn cattle, which is to take place on the 26th of June next. Mr. V. has a good herd; and as all the cows are in calf to his Bates bulls, or on crosses of the same, this adds much to their value. Of the superiority of Mr. Bates' stock, we have often spoken in the Agriculturist.

AGRICULTURAL WAREHOUSE AND Seed Store, Quincy Hall, over the Market, Boston.—The proprietors having recently enlarged their warehouse, and increased their works at Worcester, would respectfully invite the attention of planters and dealers in agricultural and horticultural implements, garden and field seeds, &c., to their stock, comprising the largest and best assortment to be found in the United States, which are offered at low prices.

Of plows, we have the greatest variety of kinds and sizes. Improved Sod Plows for flat furrows; improved Scotch do. for lapped furrows; improved stubble do., which are especially adapted to deep tillage, or varying from 6 to 12 inches in depth. Self-sharpening, Hill-side, Subsoil, Double-mould, Corn, Cotton, Sugar and Rice Plows. Cylinder Hay Cutters, Smith's Patent Lever Gate and others. Seed Sowers of various sizes and prices, Patent Cornshellers, with and without Separators, Bachelor's Patent Corn Planters, improved, Fanning Mills of various sizes, Horse Powers, Threshing Machines, Thermometer Churns, Robbins' Patent Centrifugal do., Cylinder do., Dash do., Corn and Cob Crushers, Corn Planters, together with almost every article wanted on the plantation, farm, or garden. Illustrated Catalogues sent gratis on application, post paid.

RUGGLES, NOURSE, MASON & Co.,
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FRUIT TREES FOR SALE.—The subscriber offers for sale this spring, a fine, large, handsome stock of trees, among which are 30,000 Apple Trees from 7 to 12 feet high, at \$12 per 100; a large stock of fine Baldwins, Rhode-Island Greenings, and Newton Pippins; 6,000 large and well-formed Cherry Trees, 25 cents each; a large stock of Peach, Plum, Pear, Apricot, and Nectarine Trees, at the lowest nursery prices; 3,000 Frost-Grape Trees, from 18 to 30 cents each; 10,000 Isabella Grape Vines, from two to five years old, at from 6 to 14 cents each, among which are fine lot of transplanted vines; 2,000 Orange or Apple-quince Bushes from 3 to 5 feet high, at from 12 to 15 cents each.

Particular care paid in taking up and packing trees. Catalogues sent to all applicants.

mar 11 CHARLES DUROIS, Fishkill Landing, N. Y.

FARMERS' AND PLANTERS' TOOL Chests. We have fitted up a number of tool chests especially for the use of farms and plantations, variously assorted with suitable tools, and at prices ranging from \$20 to \$100.

Chest No. 1 contains a Hand Saw, set of Planes, Hand Axe, Nail Hammer, Hatchet, Drawing Knife, Steel Square, Trying do., Oil Stone, Compasses, Chalk Line, four Framing Chisels, four Firmer do., and four Augers, \$20.

No. 2 contains, in addition to the above, a Back Saw, Compass Saw, and Carpenter's Adz, \$25.

No. 3 contains, in addition, a Broad Axe, Mallet, Spoke Shave, Gauge, Saw Set, Brad Awls, and Nail Punches, \$31.

No. 4 contains, also, a brace of Bits, Bevel, Rabbit Planes, Panel Gauge, four Files, and five additional Augers and Chisels, \$40.

No. 5, a large Jointer, two Rabbit Planes, two Bed do., two Match do., Plow and Bits, Hand Gauge, and Spirit Level, are added, \$54.

No. 6 has an extra fine brace of Bits, three Bed, and one additional Rabbit Planes, Gages, Files, &c., \$62.

No. 7, one Panel Square, one pair of Match Planes, one dozen heavy Firmer Chisels, Slitting Gauge, Trying Square, Fillister, and Carpenter's Rule are added, \$70.

No. 8, Gutter Plane, Sash do., Circular do., two Dado Planes, Compasses, Adz, and Tapp Line are added, \$80.

To these may be added any other tools required, such as Pinch-pliers, Drills, Hand Vice, Pliers, Rivets, Soldering Tools, suitable for repairing harnesses; and, in fact, almost any kind required upon the farm or plantation, at a reasonable addition to the price of any chest ordered.

A. B. ALLEN & Co., 189 and 191 Water st

THE AMERICAN LIVE-STOCK INSURANCE COMPANY, Vincennes, Indiana.

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Among the numerous discoveries science has made in this generation to facilitate the business of life, increase its enjoyment, and even prolong the term of human existence, none can be named of more real value to mankind, than this contribution of chemistry to the healing art. A vast trial of its virtues throughout this broad country has proved beyond a doubt, that no medicine nor combination of medicines yet known, can so surely control and cure the numerous varieties of pulmonary disease which have hitherto swept from our midst thousands and thousands every year. Indeed, there is now abundant reason to believe a remedy has at length been found which can be relied on to cure the most dangerous affections of the lungs. Our space here will not permit us to publish any proportion of the cures effected by its use, but we would present the following opinions of eminent men, and refer further inquiry to the circular, which the agent below named will always be pleased to furnish free, wherein are full particulars, and indisputable proof of these facts.

From the President of *Amherst College*, the celebrated Professor *Hitchcock*.—"James C. Ayer, Sir: I have used your Cherry Pectoral in my own case of deep-seated bronchitis, and am satisfied from its chemical constitution, that it is an admirable compound for the relief of laryngeal and bronchial difficulties. If my opinion as to its superior character be of any service, you are at liberty to use it as you think proper.

EDWARD HITCHCOCK, LL. D.

From the widely celebrated Professor *Stillman, M. D., LL. D.*, Professor of Chemistry, Mineralogy, &c., *Yale College*, Member of the *Lit. Hist. Med. Phil. and Scientific Societies of America and Europe*.—"I deem the Cherry Pectoral an admirable composition from some of the best articles in the *Materia Medica*, and a very effective remedy for the class of diseases it is intended to cure.

New Haven, Ct., Nov. 1st., 1849.

From one of the first Physicians in *Maine*.—"Dr. J. C. Ayer, Lowell, Dear Sir: I am now constantly using your Cherry Pectoral in my practice, and prefer it to any other medicine for pulmonary complaints. From observation of many severe cases, I am convinced it will cure coughs, colds, and diseases of the lungs, that have put to defiance all other remedies. I invariably recommend its use in cases of consumption, and consider it much the best remedy known for that disease.

Respectfully yours,

I. S. CUSHMAN, M. D.

Saco, Me., April 26th., 1849.

Prepared and sold by James C. Ayer, Practical Chemist, Lowell, Mass. Also by druggists everywhere.

FRUIT TREES FOR SALE.—50,000 Peach Trees, all of the best market varieties, at the following prices:—By the single hundred \$5. One thousand, \$45. And ten thousand for \$400. Also, 40,000 Apple Trees of the best market varieties, and of large size. By the single hundred, \$12.50, or one thousand for \$110. Matts and packing, \$1 per hundred for Peach, and \$2 for Apple Trees. Catalogues will be forwarded to all applicants.

ISAAC PULLEN,

Jan 4t Hightstown, Mercer Co., New Jersey.

GREAT SALE OF DAIRY STOCK.—The subscriber will offer for sale, without reserve, at Public Auction, on Tuesday the 25th day of March, 1851, at 12 o'clock, on the farm on which he resides at Morrisania, Westchester county, N. Y., upwards of 100 head of Cows and Heifers. About 50 head are Native and Amsterdam Dutch Cows, selected by the subscriber with reference to milking qualities. The remainder, about 50 head, are grades, one half, three quarters, and seven eighths blooded. Heifers from one to five years old, bred by the subscriber out of the very best of cows, and got by the celebrated imported shorthorned bull Marcus, and so far as they have come to maturity, they appear to combine with most faultless symmetry, nearly every point indicative of perfection in a dairy cow. Taking the whole dairy together, it is, perhaps, the best selected in the United States. The cows, with a few exceptions, are all young and in calf by the fine bull Amsterdam. The many premiums that I have been awarded by the State Agricultural Society and the American Institute give evidence of my success as a breeder. I will also sell my shorthorned cow that took the first Premium at the American Institute Fair in October last, two two-year-old heifers, and one yearling, all thorough bred. Two yoke of very superior working cattle, with several fine horses, one boar of the Russian grass breed, one imported, improved Berkshire sow and pigs, one Suffolk sow and pigs. The number of hogs, in all, will be from 50 to 60, and some of them as fine as can be produced. All the farm is well sils, also those of the dairy, which are numerous. A catalogue and description of each animal will be given on the day of sale. Stock purchased to be sent to a distance will be delivered by the subscriber, on ship, canal, or railroad cars, in the city of New York, free of risk and expense to the purchaser.

Morrisania is nine miles from New York by Harlem Railroad. f 2t*

THOMAS BELL.

FOR SALE.—The Dwelling House and about seven acres of ground adjoining, situated in the centre of Northampton, Mass., formerly occupied by Thomas Napier, Esq. The house is in complete repair, with all the modern improvements. It commands a beautiful view of the Connecticut Valley, and is within half a mile of the railroad. For particulars, inquire of

R. L. ALLEN, 189 Water st. N. Y., or
S. S. HINCKLEY, Albion Hotel, Boston.

ENDLESS-CHAIN PUMPS, OR WATER Elevators. These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.

A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults of privies.

A. B. ALLEN & Co.

EAGLE PLOW.—No. 28.—The following extract from the letter of a gentleman who purchased one of these plows, fully explains its character. "In answer to your inquiry how I like the great breaking plow, I have to say it entirely exceeds my expectations, and even your own recommendation, which I then thought quite extravagant. I put on four stout yoke of oxen, and drove into the thickest patch of scrub oak roots upon my farm; not without some misgivings, but I should break the plow instead of the roots; but I have now turned over twenty acres as completely as though it had been nothing but stubble, and the plow is this day better than it was when it came from your store. I think it the cheapest and best plow for such heavy work ever invented."

These plows are for sale at our Agricultural Warehouse, No's. 189 and 191 Water st., New York. Price, plain, \$18—full rigged, with wheel, draft rod, and cutter, \$20. **A. B. ALLEN & Co.**

GARDEN AND FIELD SEEDS FOR 1851. We are getting in, not only our usual supply, but a larger stock than ever, of all kinds of seeds required, either for field or garden culture, fresh and free from noxious weeds, &c., which are offered at wholesale or retail. Orders for trees and shrubbery executed as usual.

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MINER'S BEE HIVE.—This beautiful and valuable Hive, may be had of the subscribers, and sent to any distance, for \$5, including a Right to make the same; with full directions, so simple that any joiner can make it for only \$2. This hive is positively the best that has ever been sold in the United States.

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HOLMES' TWO NEW SKYLIGHTS are now completed, with improved means for Daguerrotype making unsurpassed in the world, being capable of taking 100 to 150 pictures a day. Holmes was awarded a medal at the Fair, and intends to merit success and achieve honors from friends and the lovers of charming pictures. No. 289 Broadway, Late, Harrison and Holmes. feb 4t*

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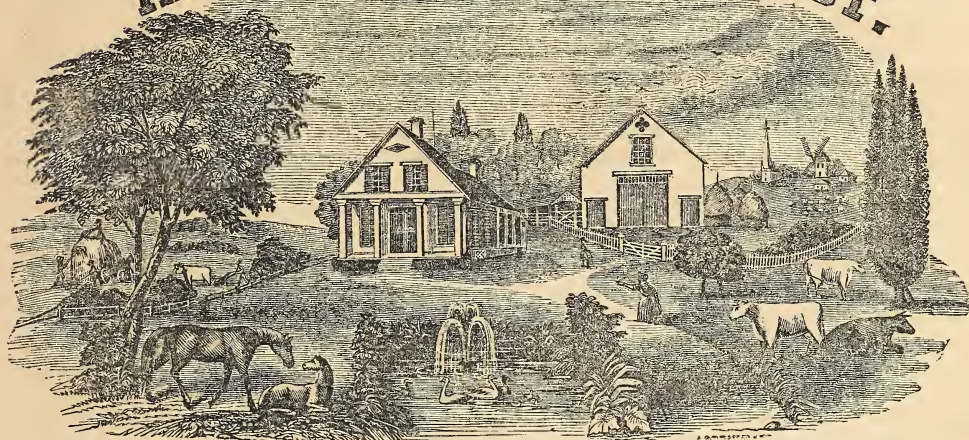
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A. B. ALLEN & CO.

AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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PORK—BACON—HAM.—No. 1.

FROM a Prize Essay, an exceedingly interesting paper, on the "Breeding and Management of Pigs," lately published in the Journal of the Royal Agricultural Society of England, by Mr. Thomas Rowlandson, we condense the following and succeeding articles on the respective merits of conversion into fresh meat, pickled pork, bacon, and ham, with the modes of preparing the same:—

In choosing a pig for any of the purposes above enumerated, or, in fact, for any purpose, or of any breed, there are certain points which should be looked for in all, namely, the skin should be soft, and thin, of a bright pink color; the neck short, the chest wide (which denotes strength of constitution); broad, straight back, short head, and fine snout; small legs and hoofs; the snout should be slightly curved upwards, and, in a large breed, it not unfrequently happens that there exists a pretty prominent swelling on the snout between the nasal and frontal bones; the sow should have at least twelve teats. If properly supplied with food, the pig can be profitably sent to the butcher from the age of one month to four-and-twenty; it would, therefore, be improper to pass over in this place, the relative merits of the various breeds in profitably rearing those luxuries ycleped sucking pigs, which the late Charles Lamb declares to be, "Of all the delicacies of the whole *mundus edibilis* I will maintain this to be the most delicate. I speak not of your grown porkers—things between pig and pork, those hobble-de-hoys—but a young and tender suckling, under a moon old, &c."

It is known that the large English breed are prolific and good mothers; that the Chinese have an early aptitude to fatten, are prolific, but bad nurses; if, therefore, the object in breeding is to get quit of the progeny, about or soon after they have arrived at lunar maturity, we should put a Chinese boar to the large English sow; if we want the hobble-de-hoys of eighteen or a score pounds' weight, we must breed the Neapolitan cross already noticed, but which I shall in future define by the term improved Essex breed. No description of breed will raise sucking pigs to the same size at six weeks old as the cross just noticed; they also form excellent porkers, speedily attaining a weight of 48 to 56 lbs. (the favorite size for porkers); if allowed to grow much larger, it will be found to pay better to treat them as stores until they are 10 or 12 months old, and then put them up to fatten; in this way, however, they are not so profit-

able as the improved Essex, neither do they make such fine bacon as the improved Berkshire. For the purpose of obtaining moderately, or even large-sized hams and bacon, no breed stands so high as the improved Berkshire, which may be considered the most generally useful to a farmer who desires a sort generally profitable in any stage of its growth. The improved Berkshire sow will suckle ten to a dozen sucking pigs within a moderate period, especially if they are assisted by artificial means hereafter to be noticed; in this respect, however, it is by no means equal to the improved Essex or the Old English sow when put to a Chinese boar. For the purpose of making fine, delicate pickled pork, the Berkshire is inferior only to the improved Essex; and for the purpose of making ham and bacon of moderate size, namely, from 10 to 12 stones' weight the carcass—not quite equal to the Essex at the former, but pretty nearly so at the latter and increased weights. The distinction here drawn arises from the fact that the Essex breed, if properly maintained from the first, arrives very early at maturity, in so far as its frame or bony structure is concerned, whilst the Berkshire takes a longer period to arrive at its ultimate and larger size; the consequence is, that a small breed like the Essex will, with proper forcing, arrive at its full natural size by the time it is nine months old, whilst the Berkshire takes 12 or 15 months ere it ceases to grow.

Now, it is a well known fact, that during the earlier stages of animal life, the nutritive parts of the food ingested by the animal and assimilated by its organism, is appropriated principally to the development of the frame, the growth of the bones, tissues, and muscles, together with a moderate amount of fat, the uses of which latter will shortly be noticed. Of the inorganic constituents of the food, phosphate of lime is the one for which there exists the largest demand, constituting as it does so large a portion of the gross weight of bones, from 15 per cent. at birth to 50 per cent. when aged, and entering more or less as a constituent of the muscles and tissues. Of the nitrogenous portions of the food of animals, the muscles, tissues, and gelatinous substances absorb the whole excess above the quantity excreted. Of those articles of food whose chemical composition consists of carbon and hydrogen, such as starch, sugar, fat, &c., there can be little doubt but they, by their combustion, afford heat, and further, the amount of their excess beyond that required for the supply of animal heat, and not

otherwise excreted, are assimilated by the animal system, in the form of fat, also aiding in the composition of other animal substances requiring, in addition to nitrogen, carbon, hydrogen, and oxygen for their formation, such as muscle, gelatine, &c. It forms no part of this question whether fat is assimilated only from fat which pre-existed in the animal's food, as asserted by Dumas and Boussingault, or that fat is formed from the starch of the food.

According to all that is at present ascertained on this subject, the dispute has little practical bearing on the matter in question; this much, however, is certain, that all parties concur in opinion, that animal heat is derived from the combustion of the carbon of the starchy matters ingested, and may be so by the combustion of fatty matters; in fact, in cases of fever and starvation, we know no other way how the animal heat is maintained than by combustion of the fat previously stored up in the system. The rapid diminution of weight in animals attacked with fever is well known, and is invariably coincident with an increased circulation of the blood and higher animal temperature.

The preceding brief physiological dissertation is inserted because, on the circumstances just detailed, in a great measure depend the relative qualities of the different breeds for early or late fattening; and also has a most important bearing on the kinds of food which ought to be employed at the various periods of their growth, as will be shown hereafter when the subject of feeding and fattening is taken into consideration.

FISH PONDS ON LONG ISLAND.

THE Suffolk Democrat has a very interesting article on the raising of fish for market and food. The following statements may prove of utility:—

In the immediate vicinity of our office are two ponds containing trout, where the propagation of fish has, we believe, been satisfactorily settled by the proprietors. One of these ponds is on the farm of Dr. Rhinelander, and the other on the farm of Ezra C. Prime, Esq. These ponds have been artificially constructed, according to the judgment and taste of the gentlemen named, and contain, at present, a vast number of trout, including some large specimens. Gideon Lee, formerly Mayor of New York, but now deceased, constructed on his farm, near Seneca Lake, several years ago, a large pond for the rearing of fish, which most profitably confirmed his expectations in this respect.

Mr. John Delafield, formerly a distinguished banker in the city of New York, has on the east side of Seneca Lake, what is considered a model farm, and obtained the prize for the best conducted farm in the state of New York. He has a pond which covers about an acre of ground, artificially constructed. Good fish are propagated in it, and they supply his table once or twice a-week. These ponds can be easily constructed in many places on the north and south borders of Long Island, and with comparatively trifling expense; and we believe that our farmers, who lack neither enterprise nor the light of science, will yet give some attention to this subject.

THE LARGEST CROP OF WINE EVER MADE IN THE SOUTH.

FROM the Alabama Planter, we clip the following, which will show to what extent this branch of industry is carried on in the south:—

My crop of grapes and wine, so far as I know, are the largest ever made in our southern country, though far below that made along the Ohio, under the auspices of Mr. N. Longworth, the enterprising vintner of the west. I made upwards of 60 barrels at the Brinkleyville vineyard from my own vines, besides a number of barrels made at my presses by neighbors. Then, some considerable quantity of grapes were sold at 50 cents per gallon—the number of bushels not ascertained; though for more than two months there were constant or daily applications for grapes, and visitors at the same time partaking of and carrying away quantities. Besides these drains, on every Saturday, pic-nic parties of 50, 60 and 70 persons obtained supplies.

Now, at 50 cents per gallon, or \$4 per bushel, it is possible to realise \$2,400 from one acre, for the rate of 600 bushels per acre can be had. But even \$2,000 is enough of agricultural product, in all conscience, you will say, to realise from one acre of ground. I say possible, for except near large cities, or in the vicinity of railroad or steamboat lines convenient to large cities, hundreds of bushels cannot be disposed of. And wines at even \$1 per gallon, agreeably to Scuppernong yields, (\$3 per bushel and more,) a vast income per acre would be the result. So much so, that so soon as ascertained by a few enterprising southern men, and in due course of time, the usual competition following, a sufficiency of the best wines would probably be made in the south to supply the whole country, and thus render us independent of foreign markets for a luxury now deemed almost

indispensable. At the vineyards of Ohio, near Cincinnati, where some hundreds of acres are devoted to the grape culture, \$1 per gallon is the common price. But my prices range from \$1 to \$6, according to quality.

SIDNEY WELLER.

Brinkleyville, N. C.

SQUASH-VINE BORER.

DURING the month of August, pumpkin and squash vines are frequently found to wither suddenly, and die to the root. Sometimes the whole vine perishes, at other times, only one or more of the branches. The cause of this premature death was made known in the New-England Farmer, for August 22d, 1828. It was shown to be an insect; and the name of *Aegeria cucurbitæ* was then given to it, with an account of its habits and transformations. These I now propose to describe anew, and to suggest a remedy for the disease which promises to be at least, partially, if not wholly successful.

The insect, in its larva state, is a whitish, grub-like caterpillar, which bores into the stem of the vine near the ground, and destroys the interior. The hole by which it enters is commonly near the root, and may readily be discovered by the castings of the grub around and beneath it. The insect is really a naked caterpillar, with a small brown head, a plump body tapering towards each end, six small feet near the head, and ten very short holders, or stump feet, in pairs, under the rest of the body. It grows to the length of an inch, or rather more, boring in the stem up and down, and sometimes into the root itself. Between the middle of August and the 1st of September, it leaves the vine, and burrows just below the surface of the ground, near the root, and there incloses itself in an oblong-oval cocoon, made of fragments of the plant and grains of earth, cemented and lined with a gummy kind of silk. Soon afterwards, having thrown off its skin, which is crowded into one end of the cocoon, it takes the chrysalis form, and remains in its cocoon, without further change, through the winter. By digging in the ground carefully, where vines have grown, and perished, the cocoons may often be found; and, in this way, numbers of the insects may be taken and destroyed in the chrysalis state.

The chrysalis resembles that of the peach-tree borer. It is nearly three quarters of an inch long, of a shining brown color, with transverse rows of minute teeth, pointing towards the tail, across the back. These little teeth enable the chrysalis to take a firm hold of the

cocoon during its exertions in breaking open the end of it. Towards the end of June or early in July, it thus perforates the cocoon, and by the help of the above-named little teeth, forces its body nearly out, when the chrysalis skin bursts open, a winged insect extricates itself therefrom, and crawls to the surface of the ground.

The body of the insect, in its winged state, is little more than half an inch long, sometimes considerably less. The head and thorax are dark olive green, and the antennæ, black. The hind body is tawny orange, with a row of four black spots upon it, and an olive-colored or blackish band at the base. The fore wings are olive green; the hind wings transparent, veined, and fringed with black. The hind legs are thickly clothed with orange-colored hairs on the outer side, with black hairs within. The wings expand about one inch and an eighth.

This little insect, which is very conspicuous for its wasp-like form, its orange-colored and black-spotted hind body, and its enormous orange and black-haired leggings, may be seen, during the month of July and fore part of August, flying at midday about squash vines, and now and then alighting close to the root, to deposit her eggs, and again taking wing and sporting in the sunshine. They can be easily taken on the wing, with a bag net, and thus many may be destroyed. In the course of a few days, having provided for her store of eggs, the female perishes, or falls a prey to her enemies. As soon as the eggs are hatched, the little grubs immediately bore into the stem of the vines, and begin their work of destruction.

It may have been observed that pumpkin and squash vines sometimes strike root at the joints, and thus establish a new connection with the soil, both to stay and to nourish them. This they do the more readily, if not too much shaken by the wind. Advantage may be taken of this fact to secure the vines from being killed by the borers. Let the vines be fastened firmly to the ground by forked sticks thrust into the earth over the principal joints, and let a little earth be drawn over each joint thus secured. They will soon take root at these places, especially if watered now and then where they are fastened. When the joints have become firmly rooted, the vines will become independent of the original roots, and will continue to thrive even when their connection therewith has been interrupted by the borer. In this way, I have saved a large vine, although the borers nearly cut off the stems from the main roots. It will

be well to examine the vines occasionally, and if any holes are found in them near the roots, carefully to lay these open by splitting the stem, and then to draw out or otherwise destroy the borers. This may be done safely, if care has been taken, beforehand, to fasten down the joints and cause them to strike root.

This insect, when it was named and described in the New-England Farmer, was supposed to be new to science, and it is confidently believed that its habits and transformations had not before been ascertained. In its winged form, however, it had been described and figured, under the name of *Melittia satyriniformis*, in Huebner's *Zuträge*, a work which has been accessible to me only within the last year. It is possible that it may be identical with the *Sphinx tibialis* of Drury, and *bombiliformis* of Cramer, which, (perhaps erroneously,) are stated to be natives of Africa. Drury's name of *tibialis*, if really intended for our insect, being the oldest, must prevail over all others. The insect is truly an *Egeria*, a genus including also, the borers of the peach tree and of the currant bush, and several other destructive insects of similar habits.

In the course of 22 years since the publication of my first communication on the *Egeria cucurbita*, I have had frequent opportunities of seeing the insect in all its stages, in my own garden. I have taken many specimens, which were in a much more perfect condition than those from which my former description was drawn, and have thus been able to make the present account far more accurate. The history of the insect is more fully detailed than in my former accounts of it; and the suggestions for protecting the vines from suffering by the depredations of the borer, are entirely new, and are the results of my experience during the last summer. On these several accounts, it is my hope that the present article may prove acceptable to you.

T. W. HARRIS.

Cambridge, Mass., Jan. 25th, 1851.

HENS IN CALIFORNIA.

REV. WALTER COLTON, the late alcalde of Monterey, finding it difficult to procure eggs when required, either for love or money, took the hen fever in the natural way; and that our friends of the Boston society may know what kind of birds they have in California, and their habits, we give Mr. Colton's own description of them:—

I purchased six hens of an Indian woman for \$6, and a rooster for 50 cents. On asking

the woman why she charged only half price for the rooster, she replied that the fellow laid no eggs, and as for his crowing that did nobody any good. Sounder reasons than these could not be furnished in a much higher place than a hen coop. The habits of these hens are a little singular. They are perfectly tame, and are as much at home in the kitchen as the cook. They never trouble themselves much about a nest, but deposit their eggs where they find it convenient; one takes the tea tray, another the ironing table, a third the oven, and there is one that always gets into the cradle. She is not at all disturbed by the tossing of the little fellow on whose premises she is intruding. Neither she nor any of her feathered sisters cackle when they leave their nest. They don't seem to think that anything worth making an ado about has come to pass. The rooster, it is true, picks up a little, and perhaps feels a feather taller. But this is the vanity of his sex. There are a great many who crow over what others have done.

COL. CHESNEY'S ACCOUNT OF THE ARABIAN HORSE.

ELSEWHERE, individuals of this species may be more showy, and even more powerful; but it is only in Arabia that the horse is found bordering on perfection. Here he is remarkable for a small head with pointed ears, peculiarly clean muscular limbs, a corresponding delicate slender shape, rather small size, and large animated eyes, expressing that intelligence which, as in the dog, is the consequence of being constantly with the members of his master's family; in fact, he generally shares their meals.

He is frequently allowed to frolic through the camp like a dog, and at other times he is picquetted at the entrance of the tent; he is exposed to the weather at all times, and compared with the treatment of his species in Europe, he is scantily fed. A meal after sunset, consisting of barley, in some parts of the country, and camel's milk in others, or a paste of dates and water, which in Nedjd is mixed with dried clover and other herbs, constitutes his usual sustenance; but, on any extraordinary exertion being required, flesh is frequently given, either raw or boiled. The Bedawins count five noble breeds of horses, all, it is understood, derived originally from Nedjd, namely, the taneyse, the manekeye, the koheyl, or koklani, the saklawye, and the julfa; of which the last and koklani are particularly prized. The julfa, a small active animal, capable of enduring great fatigue, belongs to the province of Eh'sa;

the other, which is larger, is from Yeman, or, more properly, Nedjd, and is most valued. Of the choice breeds there are many branches; there are, besides other breeds, which are considered secondary; and every mare of noble blood, if particularly swift and handsome, may give rise to a new stock. The catalogue of distinct breeds in the desert is, therefore, almost endless, and the pedigrees of individuals are varied by certificates which are handed down from father to son with infinite care; and not unfrequently they belong to more than one family, for there is often a co-partnership in mares, and hence arises the difficulty attending the purchase of one. It is, however, certain that the Arab horses deteriorate when taken elsewhere, although both sire and dam may be of first-rate breeds; by the latter, and not the former, as with us, the Arabs trace the blood. The prevailing colors are a clear bay, sorrel, white, chestnut, grey, brown, and black; but the number of horses in Arabia is comparatively few, their places, for almost every purpose in life, being supplied by camels.

NOTES FROM A KITCHEN GARDENER'S MEMORANDUM BOOK.—NO. 3.

Turnips.—From the numerous varieties of this species of vegetable, I select the "early white" and "red top," as best for the table. By some, the ruta бага when about half grown is most esteemed, chiefly, however, I suspect, on account of keeping sound through the winter, which certainly is a valuable consideration with the lovers of turnips. On the 19th of April, I sowed the ruta бага, "yellow Aberdeen," "yellow stone," and "yellow Malta," with the view of ascertaining what size the larger of these varieties would attain, when having a long season to grow in; but I was disappointed. In the early part of August, they began to show signs of decay, and towards the latter part of the month, they were mostly rotten. Those left were of large size, though not larger than I have had from later sowing; but very hard, and I am convinced it is better to defer sowing until a later period. For my own part, I consider the chief value of turnips in being a secondary crop, maturing in a short season, after the ground has been occupied by a more profitable growth. For fodder, it is the least valuable of all the agricultural roots, and but little prized as a culinary vegetable. Sowing in drills, I prefer to broadcast, thinning the plants from eight to fourteen inches, according to the variety grown, keeping the rows free

from weeds by timely hoeing, leaving the larger portion of the root exposed.

Beets.—The "long smooth blood beet" I selected from the twelve varieties I this year cultivated, as best for table use, but always sow a few of the "early turnip-rooted," pink variety, with the view of having as large an assortment of early vegetables as possible. These, as well as early carrots and early turnips, I have grown between the rows of Lima beans, and before the vines shade the ground, the beets, turnips, and carrots are suitable for the table; hence a saving of ground, which especially in a small enclosure, is desirable.

For cattle, the mangold-wurtzel and white sugar beet are most profitable, which, with those mentioned, and a few "Swiss chard," for the sake of variety and their handsome appearance, are all that I intend another year to cultivate. Ground for beets as well as carrots should be deeply spaded and thoroughly pulverised. The mangold-wurtzel and sugar beet, should be thinned to the distance of 12 inches, other varieties from six to eight.

Parsnips.—This vegetable, though esteemed by many, I make but little use of; consequently, I cultivate only a small bed, chiefly for variety, and apply similar treatment as that of other tap-rooted vegetables.

Carrots.—For table use, I prefer the "early horn;" the other four varieties are valuable for fodder, but at present I am not prepared to estimate their respective merits. For bordering a kitchen garden, carrots are very desirable, appearing early in spring and continuing late in autumn, their bright and handsomely-formed leaves making a neat edging, which, in connection with their valuable roots, possesses the advantage of being both ornamental and useful.

Salsify—(*oyster plant*).—Requiring a long season to grow in, the seed should be put in the ground as early in spring as possible. To bring this plant to perfection, it should be grown in deep, rich soil, and thinned to the distance of eight inches, and kept thoroughly clean. In the absence of proper cultivation, the roots are slender, mis-shapen, and of but little value, but with attention, attain a handsome size, and are well worthy the attention necessary to be bestowed upon them. I have derived benefit during their growth by occasionally forcing the blade of an ordinary garden spade its entire length, between the rows; thus keeping the ground loose, they grow more freely, producing smoother and in all respects handsomer roots.

Scorzonera.—With us, this variety of salsify

is but little cultivated, and not generally known. In England, it is grown freely, and graces the table of the epicure. It requires similar treatment to that of the oyster plant, from which it can be readily distinguished by its more bushy growth, in consequence of which, it should be thinned to the distance of twelve inches in the roots. It produces a blackish root, the flavor of which, when cooked, is not unlike that of the oyster plant, which in form it resembles.

Skirret.—By referring to my memorandum book, in which the daily work of my garden is noted, I find that on the 11th of April, and the 3d of May, I sowed skirret, both of which failed, and being of opinion it was in consequence of defective seed, shall try it again next year, in hopes of better success. Amateur gardeners, especially, should endeavor to cultivate as large a variety of culinary vegetables as possible, and continually adding to our list of garden products. From this source, it must be admitted the most rapid advancement has been made, and to them we are indebted for much valuable information resulting from experimental culture.

Nasturtium.—As so few of the culinary vegetables are considered ornamental, I think it as well to embrace every opportunity to render attractive the appearance of the kitchen garden, and with this view, always plant in a conspicuous position, a row of nasturtiums. In addition to the beauty of the blossoms, the fruit, when pickled, is desirable, and by many esteemed superior to capers. I prefer the dwarf, as it blooms earlier and is not so troublesome as the tall-growing varieties. Plant the seed in the latter part of April, and with little attention they will continue until destroyed by frost.

LONG NAMES FOR FRUITS.

THERE is nothing more absurd or unnecessary than a long name for a fruit, or, indeed, for anything else, in this quick-moving, go-ahead age; and yet, there seems but little disposition to reform, particularly among horticulturists. It was bad enough for them in introducing new fruits among us from abroad, to attempt to preserve the long, unpronounceable foreign names, (at least, to American organs,) attached to them; but there was a sort of necessity for this, although an abbreviated translation would have been much better, in our humble judgment; and we notice that the horticulturists themselves, very justly, often ridicule the whole thing. But are they doing any better with new ones? Let us see. Here is a Frederika-Bre-

mer pear. Why *both* these long names? Was it to flatter the distinguished novelist? Why not take one name alone, either Frederika or Bremer? But we would make it still shorter, and call it the Fred, the Ika, or the Brem pear. Here, again, are some cherries. Rockport Bigarreau, Cleveland Bigarreau. Why not call them the Rock, the Port, the Cleve, or the Land cherry?

We have the same reform to ask for flowers and plants. Here is a new heliotrope just introduced, as *Souvenire de Leige Heliotropum*. "Oh my!" we are ready to exclaim, after the celebrated Miss Namby Pamby, "what a *long tail* our pussy cat has got!"

PLANT TREES.

A LITTLE attention, a little more thought of the morrow, a little more faith in what a day or a year may bring forth, would surround every house in the country with shady groves, and fruitful yards. Plant a vine here, and a tree there—send or go to your neighbor's orchard and clip a bud or a shoot, and insert one in every stock that does not already produce fruit. Plant trees by the fence sides; the roots will penetrate beneath them and draw sustenance from ground you cannot cultivate. Set a stout thrifty grape root, directly where the soap suds from the kitchen will be daily thrown, and in three years' time, you will have a fruit-bearing screen to hide the view of some unsightly place. I give you this timely notice, that you may not let this spring pass by without making the attempt, at least, to follow my good advice. SOLON.

ECONOMY OF GRINDING CORN FOR FEED.

PERSONS engaged in fattening swine, it may be thought by some of our readers, would not need be told of the advantages of feeding meal instead of whole corn, even if the meal is fed without cooking. But there is nothing in nature so perverse as an ignorant farmer, who stubbornly persists in following the same old path his honest unenlightened father trod before him.

It has been often proved by actual experiment, that corn when ground and cooked, is 30 per cent. more economical for fattening pork than when fed in the usual way. A saving of 15 to 25 per cent. may be made by simply boiling the whole corn. This also would prevent servants from pilfering the pigs' allowance, and the consequent intoxication and mischief arising from the evil of feeding corn uncooked.

NEW-YORK STATE AGRICULTURAL SOCIETY.

At the annual meeting of this society, held at Albany on the 15th and 16th of January, the report of the treasurer was read and accepted, which gave the following general results:—

Receipts for the year,	\$15,316.91
Disbursements,	\$12,903.84

Balance on hand, including silver plate paid for, and premiums not yet presented, \$2,643.07

The following is a list of the officers elected for the ensuing year:—

President.—John Delafield, of Seneca.

Vice Presidents.—William Buel, of Monroe; Silas M. Burroughs, of Orleans; Lewis G. Morris, of Westchester; Anthon Van Bergen, of Oneida; Benjamin Enos, of Madison; Ray Tompkins, of New York.

Corresponding Secretary.—B. P. Johnson, of Albany.

Treasurer.—Luther Tucker, of Albany.

Executive Committee.—Ambros Stevens, John B. Burnett, M. G. Warner, Josiah W. Bissell, Benjamin B. Kirtland.

The Next Annual Fair.—The committee recommended Rochester, as the place for holding the next fair.

GRAFTING.

THE following is one of the most usual modes of propagating many plants and trees, particularly where the stock is larger than the scion:—

The stock is prepared as indicated by fig. 18. The lower part of the scion, A, should be made thin by slicing off a portion from each side, and forming a small shoulder at the top of the slope, as near as possible to which there should be an eye; the side of the scion on which the bark is left, should be broader and longer than the opposite side, by one fourth, or frequently by one third, or more, according as the stocks are large or small. For the latter, the inside of the scion should be cut very thin, with a short slope; and when intended for large stocks, the same side should be left fuller, so that the scions may better resist the pressure to which they may be subjected when they are introduced into the cleft. They usually have two eyes to the scion, but the second is often superfluous; for the one nearest the small shoulder has an immense advantage in this respect, that when the scion is introduced, as is represented at B, it is close to the top of the stock, and as soon as it begins to grow, it forms a basis on the latter, and thus co-operates in healing over the wound of the

stock. This position of the lower bud ought to be attended to in all modes of grafting.

The scion, such as it is represented, should be introduced in the cleft prepared as follows:—By means of a strong knife. The first of these should be placed across the transverse section of the stock, and driven into the latter in such a manner as to split the bark before the wood; and always taking care that the cleft extend but little, if at all, to the bark on the opposite side, at the lower part of the slope; and on the other side, where the scion is to be inserted, it ought to be, at first, shorter than the wedge-shaped portion of the graft. This being done, the in-

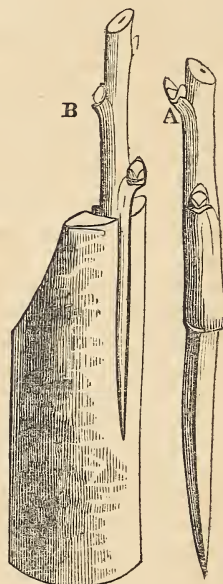


FIG. 18.

strument is quickly raised by one or more strokes, thus avoiding any kind of twisting; then the wedge-shaped beak, at the end of the handle of the cleaver, is introduced slightly into the cleft, so as to keep it sufficiently open for the introduction of all the wedge part of the scion; and this should be done in such a manner that the liber, or inner bark of the stock, may correspond as nearly as possible with that of the scion. But as we cannot always judge when this is exactly the case, it is better that the liber of the scion should be slightly outside of that of the stock rather than that it should be placed in contact with the young wood.

The graft being properly placed, we cover the wound with a mixture of equal parts of fresh loam and cow dung; but it is better to do over

the parts with the resinous composition adapted for covering the large wounds of fruit trees and others. This consists of Burgundy pitch, four parts; black pitch, yellow resin, and beeswax, of each, one part. This composition ought to be applied more especially on the eye of the scion next the top of the stock, in order to secure it against insects and the bad weather, which may supervene. Afterwards, there need not be any uneasiness on account of this coating; when the sap is put in motion, the resin liquifies sufficiently for permitting the growing shoot to pass freely through it.—*Gardeners' Chronicle*.

MUSTARD.

THERE are two species of mustard raised in the United States; the white, (*Sinapis alba*), fig. 19, which is most usually cultivated as a forage plant; and the black, (*S. nigra*), fig. 19½, generally raised for the seed. It requires a rich, loamy soil, deeply plowed, and well harrowed.



FIG. 19.



FIG. 19½

It may be sown either broadcast, in drills about two feet apart, or in hills. Mr. Parmelee, of Ohio, thus raised on 27 acres, 23,850 lbs., which brought in the Philadelphia market, \$2,908, an average of over \$100 per acre. The ground on which it is planted must be frequently stirred, and kept clear of weeds. When matured, it should be carefully cut with the scythe or sickle, and if so ripe as to shell, laid into a wagon box with tight canvas over the bottom and sides, so as prevent waste. As soon as it is perfectly dry, it may be threshed and cleaned, when it is ready for market.

The white mustard is a valuable crop as green food for cattle or sheep, or for plowing in as a fertiliser. For feeding, the white is much preferred to the black, as the seed of the latter is so tenacious of life, as to be eradicated with difficulty when once in the ground. The amount

of seed required per acre is from eight to twenty quarts, according to the kind and quality of the land, and the mode of planting or sowing. It may be sown from early spring till August, for the northern and middle states, and till the latter part of September for the southern. The crops yield from 25 to 30 bushels per acre. Both are excellent fertilisers for the soil.—*American Farm Book*.

MANUAL-LABOR SCHOOL OF AGRICULTURE FOR THE JEWS IN THE HOLY LAND.

WE had the pleasure a few days since of selecting and forwarding some agricultural implements for the above institution, recently established at Jerusalem. The school was commenced, and has hitherto been sustained and directed solely by John Meshullam, a converted Jew. The man and the object have not before been brought to our notice; but the case is so full of novelty and interest, to the intelligent and religious public of the United States, that we venture briefly to notice its existence.

Mr. Meshullam, its founder, was the son of a wealthy Jew, of London. He commenced a banking business in Genoa, Italy, where he married the daughter of a rich banker. The intelligent expositions of the Rev. Mr. Wolf, and some other kindred spirits with whom he became acquainted, effectually weaned him from Judaism. He sought and found a purer faith among the long-reviled gentiles. The usual consequence immediately followed—disinheritance by his family and persecution from his bigot race. After years of exertion, trial, and disaster, the result of the evil influences brought to bear upon him, he sought the land of his ancestors and made their ancient capital his abiding place. There he has planted himself, with his wife and children, devoted to the welfare and regeneration of his kindred and race.

Mr. Meshullam has leased a few acres of ground in a fruitful valley, adjoining the pool of Solomon, some ten miles from Jerusalem, between Bethlehem, the city of David, and Hebron, the city of Abraham. Here, he has, to a certain extent, adopted the European system of cultivation, and introduced some of the products indigenous to America—potatoes and Indian corn are among his staple products. His first crop of the former, raised as an experiment, and on a limited scale, yielded him an ample supply for his family, and left him a profit of \$250 for the surplus.

During the rainy season, so propitious is the climate, that two crops can be raised. By the aid

of Solomon's pools, which furnish a copious supply of water throughout the year, fine crops are obtained, including all varieties of fruit, peculiar to that warm climate. Grapes, figs, pomegranates, dates, olives, cucumbers, melons, &c., are raised in profusion. We understand some accessions to this new and praiseworthy enterprise are determined on, and that a small band of enterprising Americans are already organised, and expect to sail for Palestine the present season. We trust this new wave of our countrymen will push eastward, till it meets the booming tide now rapidly extending westward, and that they will meet in India to congratulate each other on a renovated world.

By a late firman, of the sultan, the occupancy, and even the ownership of the Moslem domains, is thrown open to all nations; and our straightened countrymen, who have quite lately found themselves hemmed in between the Atlantic and Pacific, or at least, for the present, and until a further annexation in Canada, Mexico, or Kamtchatka, will open a little further range for their active spirits, can now commence operations in Palestine—reclaiming the land, introducing pure Christianity, with its attendant blessings, and carrying forward the great career of physical, intellectual, and moral improvement.

Any donations of money, seeds, or implements, destined for the Manual-Labor School of the Holy Land, left with us, will be forwarded to their destination.

FORBES SHANGHAE.

A CORRESPONDENT of your paper has hit off the late poultry exhibition, at this place, in a somewhat humorous vein. His caricature of the "red Shanghae fowl is capital; the hat is his, and I hope he will wear it, broad brim and all, with becoming dignity. Any one having an eye for fun must enjoy it with a zest.

The writer, however, is mistaken in regard to the Shanghae fowls, as market poultry, and I only desire to set the matter on a proper footing, in order that the farmer, whose interests I have at heart, may breed that fowl which shall give him the best return for his investment. I, for one, cannot agree with him in regard to the Jersey blues, and having had no little experience with that breed, do not hesitate to pronounce the Shanghaes superior to them, either as layers, or for market. In fact, there are few better layers than the Shanghaes, both in summer and in winter.

Col. Brockett, of Newton, Massachusetts, has

the original importation of the Forbes stock. A few days since, he killed a pullet, which, when dressed for market, (divested of head, legs, toe nails and all,) weighed 8½ lbs. He also dressed, in like manner, two pullets, six months old, which weighed 12½ lbs. the pair. The flesh and all the meaty portion was plump and full as you could desire for the table.

Col. Brockett, through his friend, Mr. Pedder, will forward to you by Adams & Co., a pullet, which, when you have exhibited to the satisfaction of your friends who may chance to drop in, you can pluck and dress; after that, you can report through your journal. It would be well to kill and dress the fowl some four or five days previous to cooking.

Perhaps you may think me somewhat interested in the red Shanghae fowls; but I will declare to you, that I am not the owner of one of them. E. W.

Dedham, Mass., Feb., 1851.

CURIOUS FACTS IN VEGETABLE PHYSIOLOGY.

I was told at Tallahassee, Florida, that beets would not grow seed, top onions would not grow the bottoms, and black seed would not produce bulbs. Cabbage will produce seed, but that seed will not generally produce heads, but grow into long stalks with a few loose leaves on top. I have seen such stalks six feet long.

Corn from the north, though hard and flinty, when planted here, grows light and chaffy. Oats grow lighter and lighter, until they run out. On the contrary, cotton, which is here a hard woody stalk, would grow more like buckwheat in New York.

The Palma Christi has been grown here for shade trees; and tobacco was found as a wild plant all over the country, when first settled by the whites. A little further down the peninsula, sweet potatoes and arrow root are now growing wild; and so are pumpkins, and several other plants which are only grown with great care at the north. We live in a great country, as yet but little known. SOLON ROBINSON.

TO KILL COCKROACHES.—Mix equal quantities of red lead and Indian meal with molasses, making it about the consistency of paste. It is known to be a certain exterminator of roaches. A friend who was troubled with thousands upon thousands of them, rid his house of them in a very few nights by this mixture. Put it upon plates and set it where the vermin are thickest, and they will soon help themselves. Be careful not to have any article of food near by where you set the mixture.

REVIEW OF THE FEBRUARY NUMBER OF THE AGRICULTURIST.

As this is a short month of short days, let us make short work of it.

A Great Milker.—Truly a great account, and I have no doubt true. I wish all strippers in pint cups could read and realise its truth. But I suppose this cow had something to eat besides stone walls, rail fences, thistles, briars, elder bushes, toad flax, and daisies, which seem to me the most prominent features in some pastures.

Substitute for an Ice House.—I venture to say that some cute fellow might cut out this item and sell it as a great secret, for much more than you charge for a thousand equally valuable ones to your readers.

Cure for a Belloused Horse.—Just as intelligible as half the recipes published—all wind.

Chain Gates.—A new idea, which I like very much. Will some of the universal nation go to work at it, and give us cheap chain gates?

Village Lectures.—What a fund of valuable information is contained in these articles. To prevent the effects of decomposition, so deleterious to health, let the farmer not abandon the process of making manures, lest it cause sickness upon the premises. But let him study how to counteract the effect by adding charcoal, if he has it, and gypsum, to absorb the escaping ammonia, by which many a dung heap is rendered almost worthless during the process of decomposition, and the vegetable fibre almost as effectually burnt up as though it had passed through the fire, and left nothing but the ashes, while the great fertilising principle had passed off in the form of smoke, and become lost to the husbandman, and poisoned the atmosphere that his family were daily compelled to breathe. But to know this, the farmer must read; to read anything connected with farming, is to subject himself to the ridicule of the biggoted who are anxious that none should possess any more information than themselves. This difficulty will never be overcome before agricultural chemistry is taught in common schools, by teachers of common sense.

Notes from a Kitchen Gardener's Memorandum Book.—Here is one of the very kind of teachers required. He talks about the reason why different kinds of manures are beneficial to different plants. How did he obtain the knowledge? Was it instinctive, or has he come by it by study, by experiment, and careful observation? If so, then why should not all who can read profit by his experience? It is a lamentable truth that most of us are not only excessively ignorant,

but excessively fond of the article. It is surprising to hear what a vast number of excuses some people can invent to satisfy their consciences for refusing to buy a book, or subscribe for a journal devoted to the object of giving them knowledge of the pursuits of their lives.

Ventilation.—I am glad to see this important subject touched upon in your columns. It is one which requires the united efforts of all thinking men to combat. In my opinion, the want of ventilation causes more sickness in families than any other household arrangement. How much it is neglected in stables, barns, and granaries, as well as in dwellings.

Value of Dogs.—Horrible! But this is only one item in ten thousand. Yet, if half the world were to die with the hydrophobia, the other half would keep dogs.

The Princess Tribe of Shorthorns.—Another bull fight, of no interest whatever to one reader in a hundred, and will not be read by one in ten. You cannot take a more sure way to lessen the public estimation of the Agriculturist, than by these personal disputes about nothing. [We totally disagree with the "Captain" in the above conclusion.—Eds.]

The Hen Fever.—This article, or rather the illustration accompanying it, burst so suddenly upon my organ of the ludicrous, as I sat alone in the library, that I went off into a perfect guffaw of laughter. This brought the girls all in a bunch from the parlor, to see "what in the world ails father." I could only tell them I had got the "hen fever," and that set them in a twitter, and this altogether brought Old Black Joe up from the kitchen, to see what had broke loose on deck; and the whole made up a show pretty nigh equal to the "great poultry sight" at Boston, which I have just been reading about.

"Wal," says Joe, when made to comprehend the subject. "Dat Boston are a cute place, and dem Yankees always ready for speculation. If de Cap'n knows half so well how to handle big roosters as him do big ship, could be sittin' on de fence now crowing over fortune made by de hen business. 'Cause, spose we had bought dem big roosters used to see in China, and sell him here for sich price dat you read about—r'aly, I should like to go in de hen trade myself."

Effects of Irrigation.—Things talked of, but seldom practised.

Salt for Cattle and Sheep.—As it is a matter of no consequence with some stories which end you begin at, I will commence upon the last part of this salty article. I hope it will be con-

ceded that I know something about salt water, whether I do or not about the necessity of salting bipeds and quadrupeds. But beginning where your correspondent left off, I shall dispute the point upon which he closes his article. It is not a "mooted question, whether salt is necessary to man or beast." The argument adduced by Mr. R. is sufficient for a reasonable man, but here is another anchor to wind'ard. In Prescott's Mexico, it is mentioned that the Tlascalans, during a war of more than 50 years with the Aztecs, were confined to the products of their own territory, and in all that time made no use of salt; until the taste of the people had become so accustomed to its disuse by long abstinence, that it required several generations after the conquest, to reconcile them to the use of salt at their meals. Evidence of a similar kind could be furnished to almost any extent, to prove that salt is not a necessary of life or health, any more than tea, coffee, pepper, spice, and spirituous liquors, all of which are stimulants to the appetite, or excitors of the passions—very evil ones, too, sometimes. No degeneracy can be attributed to the Tlascalans, in consequence of their not using salt; for at the time Cortez appeared among them, they were the bravest and hardiest race in Mexico.

A Javert in Ohio.—I cannot follow the writer in all his wanderings—I must only stop at a few points as he whirls along a railroad, tiresome for its directness. Although Ohio has now become an old state in comparison with several others, yet it seems as though a great portion of the surface of its rich soil is still covered with the original forest, wasting its riches upon the desert air.

Osage-Orange Hedges you say "may make a substantial enclosure." So it *may*—will it? [Yes, it *does*, and *will*.—Eds.]

Wasting Manure.—You speak of the way the manure from the distilleries and pig pens is sent into the river as a great want of economy. It is not of the least importance. If they retain the hogs and whisky, what on earth more than that can the people want?

Ladies' Department.—My daughters, as well as a great many other daughters, always look to this page for something new and interesting in domestic economy—things that may be relied upon not only as useful, but correct.

Foreign Agricultural News.—This page is unusually rich this month. Do not fail to refer to it when your horse has the colic.

Phosphate of Lime.—This article which is noticed in the Editors' Table as lately discovered

on Lake Champlain, undoubtedly contains an error in the figures—92 per cent. is quite too high. [We have the best authority for making this statement, namely, that of the gentleman, (and he is a good chemist,) who analysed it.—Eds.] If it is half that, it is valuable. REVIEWER.

WHEAT GROWING IN THE WEST.

As your paper is a national one, perhaps some of your readers may be interested in a brief statement of the system of wheat growing in this part of the west, and its actual and probable effects upon the soil and the purse.

It was a very natural and obvious move on the part of the first settlers of the west to engage in raising wheat. Possessing a soil rich in the organic and inorganic elements of that noble cereal, and generally having but a small amount of capital remaining, after paying for their farms, they adopted at once, that course of husbandry which would yield the readiest returns for the capital and labor bestowed. But a most wretchedly destructive feature was given to our early farming, which is ignorantly persisted in at the present time, to a great extent. It consists in what is called "stubbling in;" that is, as soon as the grain is removed, and the hogs have gleaned the fields of the scattering heads, plows and teams are put in, and the stubble turned under; and this, at the proper, or improper season is again sowed with wheat. It must be sowed. If it cannot be sowed early, it must be sowed late, even if the snow flies. You will agree with me, Messrs. Editors, that this is a most baneful practice.

Another practice is to summer fallow, or plant with Indian corn, and sow with wheat, each alternate year. This practice, although not so deleterious to our soils as the former, is highly pernicious, and should never be practised without a liberal application of manure. The effects of these iniquitous practices are becoming year after year more apparent. Our farmers are cramped; they have depended on the wheat crop, and that has failed; the poor little insect has to bear all the blame, when in fact, I believe the more effective cause, is to be found in mean, yes, *mean* cultivation, and a broken-down soil, a soil deprived or robbed of its essential elements of cereal constitution. We are almost certain of a good crop when we have a piece of "new breaking" to put in with wheat.

But a small portion of the farmers in this part of the west have yet introduced the cultivated grasses. Marshes abound, from which is

obtained a tolerable article of hay. The effects of the palpable neglect to adopt an alternating system, and bring into use, the grasses, will, I fear, have to be endured, to some extent, by the third and fourth generations.

But, thanks to the agricultural press generally; its improvement is working its way into the rustic cabin of the western settler; and in justice to the western farmer, it must be said, that as sure as he reads, he awakes to effort, and casts about for a better system, and as far as his means will permit, he launches into schemes for improvement.

Clover does nobly on all our western openings by the application of a little gypsum. This is to be obtained, mostly, at Granite Rapids, in this state, where it is worth \$1 per barrel. It costs us, adding purchase price, \$2.50, and \$3 to get it here. It appears to me that our eastern friends might make money by sending plaster into Southern Michigan, and Northern Indiana. There is an increasing demand for it.

Were it not that it would extend this article to an inadmissible length, I would write a few words about the drill method of sowing wheat. I think that will soon, to a great extent, supercede the broadcast method. But I will close by inquiring the price of your wheat drills, (as I suppose you have them,) and also whether you can send implements with safety, to Hillsdale, the western terminus of the Southern Railroad, or to some point on the Central Railroad.

CHARLES BETTS.

Burr-Oak Farm, Mich.

The price of our wheat drill is \$100. It is made in a superior manner, sows seven drills at a time, and is worked by one horse. Implements and seeds of any kind can be shipped as desired by our correspondent, we presume, and go through with entire safety.

BURNING GAS FOR FUEL.

AN apparatus, which the inventor calls the *atmopyre*, is noticed with commendation in the London Lancet. The principle of the invention really consists in burning the oxygen of the atmosphere, by a small outlay of gas, so as to produce an intense heat, applicable for heating apartments or raising steam. The consumption of two cubic feet of gas raised the temperature of a room, the cubic contents of which was 8,557 feet, five degrees of Fahrenheit in seventeen minutes. Twenty-five feet per hour of gas burnt in the atmosphere produced steam sufficient for a one-horse-power engine. The heat

engendered by burning gas in this way is increased one hundred per cent. over the same quantity burnt in the ordinary way.

THE THOROUGH-BRED HORSE.

THE horse, from the earliest ages to the present day, has been universally regarded as an animal of the highest interest and importance to man. In the Scriptures, in history, in romance, and poetry, he occupies many a glowing page, and no felicity, or elaboration of thought or language is spared to illustrate and portray his usefulness and beauty. As our servant, companion, friend, and protector, most of our necessities, comforts, and amusements are more or less dependent upon him. Without him, the severe battles of the Canaanites could not have been maintained; nor could the holy expeditions of the Crusades have been carried on. Much of the renown of Alexander is identified with his favorite Bucephalus; and the glory won by King Richard at Bosthworth Field would, without his gallant White Surrey, have been less brilliant. Tamarlane, deprived of his Arabian cavalry, never could have subjugated Persia, India, and Syria; nor could Suwarrow, without his noble Barbs, have won such undying fame by his victories in Poland, Italy, and Turkey. Joan of Arc, divested of her dashing courser, would probably never have astonished the world with her martial deeds; nor could Bonaparte, without his well-trained cavalry, have achieved his dazzling triumphs at Austerlitz, Jena, and Lodi. Wellington, shorn at Waterloo of his dragoons, could not have added so much lustre to his fame; nor could our own immortal Washington, without his equestrian auxiliaries, have given peace and freedom to his country. The farmer, deprived of his faithful horse, could make but little progress in husbandry; and the sportsman and gentleman of leisure would suffer many an abridgment of their pleasures, did not their prancing steeds impatiently wait a summons to be mounted. The tournaments, so vividly described by Sir Walter Scott in his imperishable novels, would have been dull and insipid divested of the share which the high-mettled horses bore therein; and Diana Vernon would certainly have appeared less lovely, had we not seen her in the fox chase so gracefully bounding through bushes on her beautiful "jet-black Phœbe." *Painting* would have been shorn of one of its happiest triumphs, had not the noble charger of Washington occupied the foreground of Trumbull's admirable representation of "Crossing the Delaware;" and *Poetry* would

have lost some of its most attractive charms, had not Homer sung the praises of Achilles' coursers, and Byron made the wild steed of Mazeppa a theme for his enchanting muse. The classic reader cannot forget that beautiful passage in the *Iliad*, wherein the ancient bard represents the horses of Achilles as actually weeping for his death.

"Meantime, at distance from the scene of blood,
The pensive steeds of great Achilles stood;
Their godlike master slain before their eyes,
They wept, and shar'd in human miseries.
In vain Automedon now shakes the rein,
Now plies the lash, and soothes and threats in vain;
Nor to the fight nor Hellespont they go,
Restive they stood, and obstinate in woe."

Great Jove is then represented as taking pity at their distress, and thus addressing them:

"Unhappy coursers of immortal strain!
Exempt from age, and deathless now in vain;
Did we your race on mortal man bestow,
Only, alas! to share in mortal woe?
Ourselves will swiftness to your nerves impart,
Ourselves with rising spirits swell your heart.
Automedon your rapid flight shall bear
Safe to the navy through the storm of war.
He said: and, breathing in the immortal horse
Excessive spirit, urg'd them to the course;
From their high manes they shake the dust and bear
The kindling chariot through the parted war."

Since, then, it is apparent that the horse is essential to our protection, comforts, necessities, or amusements, in almost every step of our progress through life, it is certainly of the highest importance that he should be rendered as serviceable, valuable, and perfect as possible. This can only be accomplished by the strictest attention to the improvement of his breed. A trial of speed effectually tests his durability, activity, and soundness, while, at the same time, it affords a most agreeable, innocent, and exciting recreation or amusement. A horse, that can well acquit himself in a race of four miles, proves that his bones, sinews, muscles, lungs, and windpipe are sound, well proportioned, and entirely capable of performing their proper functions in the best manner. If any defect exist, the severe exercise of so long and so rapid a race would quickly bring it to view. It is not unusual for a fine horse, in a race of four-mile heats, to run twelve or sixteen miles. Such a trial, therefore, clearly establishes his strength, activity, soundness, and endurance—and from such a horse, it would be manifestly safe and prudent to breed. His produce would unquestionably be much more likely to excel in those essential qualities than the produce of a common cold-blooded horse. Therefore, by being always careful to breed from no other stock

than such as have been well tried in the manner designated, you will be sure of having very superior horses, whilst the expense of keeping a good one is no greater than that of keeping a bad one.

The offspring of the high-bred, warm-blooded horse is in many respects greatly superior to, and more valuable, than the stock of the common cold-blooded horse.

1st. They are more intelligent, and their dispositions more kind and tractable.

2. They are less liable to disease, and their carriage and appearance more elegant and showy.

3. They are more active, and stand the heat much better. A fine-blooded horse can travel long distances rapidly in the hottest weather, when probably a common one would fall dead under the same exercise.

4. They live to a much greater age. A common cold-blooded horse rarely lives, (to be of any service,) beyond 15 or 16 years; but a high-bred warm-blooded one is serviceable at 30. The sire of the celebrated racer Sir Archy was 39 years old before the latter was foaled.

5. Their superior fleetness, durability, and bravery render them much more efficient for cavalry and expresses.

6. They will always command a higher price in market.

These excellent qualities, of course, render them in all respects more valuable, and conclusively prove that every person in the community has a deep interest in extending, cultivating, and improving the fine-blooded breeds.—*Sportsman*.

DIFFERENT KINDS OF FOOD FOR SOILING.

1st. *Wheat and Rye*.—The earliest food which can be depended upon in the spring, for soiling, is wheat or rye. We much prefer the former, as it is sweeter and more nutritious; nor does the straw become tough and harsh so soon as rye; it consequently lasts longer.

Cultivation.—If the ground be not already rich, it should be made so. It cannot be made too rich for this purpose. Plow deep, harrow fine, and then roll. Now take an extra quantity of seed, and sow broadcast, as early as the last of August or first week in September. Plow this in about three inches deep with a three-furrow plow; leave the land in its rough state, without harrowing or rolling. By using an extra quantity of seed, the stalks grow finer, sweeter, and more tender; and by leaving the land rough, the plant is not so likely to winter-kill.

Plowing in the seed has a further advantage; the plant strikes a *deeper* root, and consequently grows stronger than if lightly harrowed in; it also comes up in rows, as if drilled, which gives the air a much better opportunity to circulate among the stalks; thus promoting a more rapid and better growth. However rank the grain may grow in the fall, it is not advisable to feed it off in the slightest degree, except in a southern climate. North, the grain requires all of its fall growth to protect it during the winter, and insure a vigorous and rapid start in the spring.

2d. *Orchard Grass, Lucern, Ray Grass, and Clover.*—These grasses come forward first in spring in the order mentioned, although they ripen for hay about the same time. In a very early season, we have had orchard grass in a dry, warm, rich soil, two feet high, and fit for soiling in the latitude of 40° 30', by the last of April; it however cannot generally be depended upon in this latitude before the last of May.

Cultivation.—For orchard and ray grass the land must be rich, clean, and well pulverised. Sow each kind by itself, at the rate of at least two bushels of seed per acre, early in the fall or spring, then harrow and roll. Neither clover nor other seed should be sown with these grasses; and it is important that the seed be sown thick; otherwise it will come up in tufts, and in a few years be almost entirely rooted out by other grasses. The yield is very large when properly cultivated. We have taken upwards of three tons per acre of well-cured hay of the former. For hay, neither of these grasses is quite so good as Timothy, herdsgrass, or red top. This ray grass must not be confounded with rye grass nor oat grass. It is much superior to either, and makes the finest and best of lawns for our country. It is now in great request in this vicinity for the purpose of soiling.

Clover should be sown the last of February, or early in March, just after a fall of snow, if possible, at the rate of ten to sixteen pounds of seed per acre, at least. Whenever there is frost upon it, especially in the spring, not a hoof should be allowed to cross nor nibble it till the sun has dried off the frost. We have seen a small flock of sheep ruin a whole field in a single hour, by pasturing it on a frosty spring morning.

The cultivation of lucern is attended with too much trouble to find favor at the present high price of labor in the United States. It requires a very rich, deep, dry, warm soil, prepared in the best manner. Sow fifteen to twenty pounds of seed per acre, in drills, nine to eighteen

inches apart, the last of April or first of May, in this climate. Hoe it well during the summer, and keep it clear of weeds; otherwise they will check its growth, or almost entirely kill it. The following year, it may be cut several times during the season of its growth. After each cutting, liquid manure, or a light rich compost should be spread over it.

Indian Corn.—By sowing the earlier varieties for the first sowings, this may be had from the fore part of July till late in November. The proper time for cutting corn for soiling, is when the ear is well set on the stalk, and the grain is in milk. If cut before this, it is apt to scour the stock, and it is not so nutritious for them.

Cultivation.—Plow very deep—subsoil if possible—you cannot make the land too rich. Sow the earlier varieties, in drills from twelve to eighteen inches apart; the later, from eighteen to thirty inches; keep the ground clear of weeds, either by the hand cultivator or hoes. To sow in drills is far better than broadcast, as the air then circulates freely among the stalks, and makes a much healthier and better growth. The varieties of sweet corn are decidedly superior for soiling, as the stalks are sweeter, and more nutritious. Not so great a growth of stalks, perhaps, can be got per acre; but the superior quality of the stalks and ears more than compensates for the deficiency in quantity.

Millet.—Prepare the ground as for orchard grass, and sow broadcast, or in drills, six inches apart, from last of April to the first of July. It may be harrowed, or plowed in like wheat, only not so deep by one inch. It should be cut for soiling when the stalks are in flower, or just as going out of flower.

Oats and Buckwheat.—Sow and cultivate the same as millet.

There are other grains and grasses which may be profitably cultivated for soiling, but the above are the most important.

Of pumpkins, cymilins, squashes, sugar beets, and other roots which ripen in the fall, we shall not at present speak, as it would make this article too long.

Treatment of Stock under the Soiling System.—Stock, when soiled, should have a free range of a few acres at least, in a well-shaded, and if possible, well-watered pasture. Exercise in the open air, the greater part of the day, is absolutely essential to their good health and thrift. Their food may be thrown in small bundles on the clean grass ground; but a better manner for feeding is, to place the food in common hay ricks, standing on legs two or three feet from

the ground. There is much less waste by adopting this method. If fed in stalks, the corn stalks should be cut up fine before feeding, in a machine made expressly for this purpose. Every particle of them will then be consumed with avidity.

Green food should always be given fresh cut; if allowed to lie a few hours, and become half wilted, it is very injurious to stock, often causing disease, and sometimes death. Be very careful not to feed too much at a time, otherwise it may produce hoven. If soiled entirely, stock ought to be fed five times a-day. We hope our readers will keep these hints in special remembrance.

THE ENDICOTT PEAR TREE.

TRADITION connects the planting of the Endicott Pear Tree and the foundation of Salem, with the same date, 1628. Historical evidence renders it certain that the existence of the tree could not have been so early as the origin of the first town of Massachusetts.

The late reverend and learned Doct. Wm. Bently, "desirous," in his own words, "to honor the man who, above all others, deserves the name of the father of New England," addressed three letters to President John Adams, in relation to the antiquity of the survivor of the orchard of Gov. John Endicott. These manuscripts are preserved in the archives of the Massachusetts Historical Society, and have been kindly communicated by Rev. Doct. Thaddeus M. Harris.

Doct. Bently, in his letter, dated October, 10th, 1809, writes thus: "The tree is near the site of the first mansion of the governor, and the land and tree always have been, and now, (1809,) are, the property of his direct heirs, being in the possession of Mr. John Endicott, nearly fourscore years of age and of the sixth generation. To ascertain its age, near it stood a dial, which was fixed upon a pedestal, which, the governor said, bore the age of the tree. That dial has been for years in my possession. It is in copper, square, horizontal, three inches, a very fair impression, and in the highest order. It was marked William Boyer, London, clock-maker, fecit, I. 1630, E., the initials of the governor's name."

"This 'Old Pear Tree' is situated on the southern side of a gentle slope of land, and sheltered by it, in some measure, from the piercing north winds, in what was once the garden of Governor Endicott. The surrounding soil is a light loam, with a substratum of clay. Its appearance at this time is rather dwarfish, being only 18 feet high, and 55 feet in circumference of its branches. The trunk exhibits all the marks of extreme old age, being entirely hollow, and mostly open on the south side, with just sufficient bark to convey sap to its branches. It is seven feet, four inches in circumference near the roots, and is divided into three parts, two of which are connected to the height of 18 inches; the other is entirely distinct, from the ground upwards."



THE ENDICOTT PEAR TREE.—FIG. 20.

No doubt the dilapidated condition of the trunk is owing, in a measure, to the want of care during the most part of the first two centuries of its existence, being situated in an open field, without any protection, and often browsed by cattle and injured by storms. This patriarch within the last forty years has often suffered from easterly and southerly gales. In October, 1804, it was nearly prostrated, being shorn of all its branches, and its trunk split and divided in the manner before spoken of. In the heavy gale of September, 1815, it was again doomed to a similar fate; almost all its limbs at that time, were either split or broken, and it appeared doubtful for some time, if it would ever recover; but such was the wonderful tenacity of life that it rose again, phoenix like, as it were, from its very ashes. It continues to produce fruit yearly, the average being about two bushels.—*Trans. American Institute.*

PRIZE MERINO SHEEP.

THE annexed group was taken from life by C. Mayr, artist, at the exhibition of the American Institute, at Madison Cottage, in the city of New York, October 11th, 1849; delineating Me-

rinus belonging to Messrs. Cullen and George W. Capeheart, Esqrs., of Merry Hill, North Carolina. To them was awarded a silver cup, for the best pen of fine-wooled ewes; and a diploma, for the second best fine-wooled buck.



PAULAR MERINO SHEEP.—FIG. 21.
The property of George W. and Cullen Capeheart, Merry Hills, N. C.

These sheep were bred and forwarded by S. W. Jewett, Esq., of Vermont, got by his premium buck, Fortune. They are distinguished for yielding very heavy fleeces of fine wool; the ewes annually yield over five pounds, and the rams over ten, of well-cleansed wool. They are also noted for being very docile and hardy, possessing very strong constitutions, and are able to thrive upon very scanty keep. The ewes are good nurses, and the lambs are easily reared,

because they drop strong, and are protected from cold and wet by a thick covering or coating of soft hair and fur, which in a few months is shed, and replaced by a thick pelt of rich, soft, oily wool, remarkably compact, covering the whole body; a natural clothing, sure to protect them in severe weather.

This breed of sheep are also distinguished for having loose, heavy, folded skins, particularly about the neck, in the form of a ruffle, giving them a bold and lofty appearance, with some folds upon the ribs, and a wide-set tail at the rump. In the Patent-Office Report for 1847, may be found an able letter from Charles L. Fleischman, Esq., accompanied with cuts representing the best breeds of sheep in Germany. On page 268, Mr. Fleischman says: "Twenty years ago, bucks with a smooth, tight skin, which had extremely fine wool, were considered the best; but their fleeces were light in weight, and had a tendency to run into twist. The German Merino wool grower had to come back to the original form of rams, with a loose skin, many folds, and heavy fleeces; and since then, they have succeeded in uniting with a great quantity of wool, a high degree of fineness. This kind of heavy-folded animals, rams, and ewes, are now considered the best for breeding and wool bearing.

"The Spaniards kill all those lambs which are born with few folds and fine short hair, or almost naked; because, experience has taught them that the offspring of such animals bear a fine wool, but produce, by degrees, animals with flabby, light fleeces, which gradually lose the folds, and become thinner and thinner in fleece; and are consequently less advantageous to the wool grower than those sheep which are produced from lambs of plenty of folds, and a thick cover of fine, soft hair."—*Transactions of the American Institute.*

WIRE FENCE FOR FOREST LANDS.

As we are so frequently called upon, personally, for knowledge on this subject, we will here give, for general information, the manner in which wire fence is frequently made in the forest lands, in this vicinity.

In order to make a strong fence, it requires three strands of wire. No. 9 is used for the lower strand, and is placed from one to two feet from the ground. No. 8 is used for the middle, and is placed from one foot to eighteen inches above the first. No. 7 is used for the upper strand, and is placed the same distance above the second, as that is from the first. If

cattle are very unruly, it may be advisable to use larger wire; but anything smaller is too light for this purpose.

The best way of fastening the wire, is to bore a half or three-quarter inch hole through the centre of small trees, from three to six inches in diameter, and run the wire through these; otherwise, drive small staples made of the best wrought iron into the trees. The objection to iron staples is, that where the wire rests upon them, it corrodes much more rapidly than if resting on wood. These trees should be about ten feet apart; further than this, the stock is much more likely to get their heads through the wire and injure the fence.

Wire fence is found to be quite as efficient against unruly stock, as the best rails; in fact, in many instances, more so, for they cannot tear it down as they will rails, nor can they easily break it. Generally, they seem afraid of it, and the moment the wire touches any part of the body, they immediately withdraw from it.

Wire fence gives the country a much more beautiful appearance; for it cannot be seen a great distance off, and thus the landscape appears like an immense park interspersed with cultivated fields of diversified crops. Walls are often necessary to use up the stone lying on the land; but rail fences are only a needless expense, and are odious to the eye of every lover of a fine landscape. We detest them in every shape and form, and shall rejoice to see the day when not one can be found in existence; but that time will not come till the farmers of this country get more refined in their notions, and have the moral firmness to study their interests better than they now do, and *compel all loafers* to take care of their own stock, instead of turning them out into the highways to be supported by others.

DISCOVERY OF A NEW FIBROUS PLANT.—Our esteemed friend, Col. Maunsel White, of New Orleans, informs the editor of the Delta, that the okra plant, which grows freely throughout the south, is one of the best fibrous plants known. It is coated with ten layers, which are very easily separated from the wood by crushing between iron rollers like a sugar mill; and that the hemp is almost indestructible in water. This may prove a valuable substitute for hemp, as it can be grown where that cannot, and at much less expense for culture and preparation. There are many things yet to be learned before we shall all become *book farmers*.

DISCOVERY OF A BED OF PHOSPHATE OF LIME
AT HURDSTOWN, NEW JERSEY.

I AM happy to inform you that your *prediction* is verified, and that your *hope* in regard to the discovery of other veins of phosphate of lime in this country, is realised. In the course of the past summer, Dr. C. T. Jackson and Mr. Francis Alger, of Boston, discovered a valuable and extensive deposit of massive phosphorite, (phosphate of lime,) in the town of Hurdstown, Morris county, New Jersey, and but a few miles from the Morris Canal. The mineral is *perfectly pure*, and is composed of 54 per cent. of lime, and 46 of phosphoric acid.

Last August, Mr. Alger forwarded to me a sample of 15 or 20 pounds of this phosphate, finely ground, with a request that I would experiment with it on my growing crops, but the lateness of the season prevented its application. In his letter to me, he said there was no trouble in making it into a perfectly fine powder, if that was thought best. The sample I received was from the size of coarse shot to fine flour, and of a brownish color. A portion of it, I treated with sulphuric acid, and then it became white, like the water-slaked white lime of Maine. No doubt, by the addition of the acid, it was converted into a bi-phosphate of lime, a much more soluble salt.

A few days since, I received a letter from Mr. Alger, in which he writes, that he has succeeded in getting a quantity of his phosphorite ground, and that he had sent 10 tons to England, whence he had received propositions for more, both for the purpose of manure, and for making, (when combined with other materials,) porcelain ware, and hopes the quantity may prove sufficient to meet the demands of both countries. In order to have its merits tested for manuring purposes, he will have the ground mineral put up in casks of 100 lbs. each. I have as yet no information as to the price it can be supplied to farmers. In its massive state, it is harder and heavier than carbonate of lime, its specific gravity being about three times that of water; but as there is no difficulty in making it into a perfectly fine powder, I presume it may be supplied to them at a cheap rate. Of its intrinsic value to the farmer for spreading upon his old pasture grounds, his orchards, and for the wheat and turnip crops, I think there can be but one opinion in the mind of any one who is at all familiar with English farming and English agricultural publications.

Bones are a combination of phosphoric acid and lime, but in less proportions than in the phosphorite. Now much, very much, of the

fertilising properties of bone manure is due to the phosphoric acid and lime. Millions of dollars are annually expended by the British farmers in the purchase of bone manure. Every year, there are vast importations into England of animal, and in many instances, of human bones, to be applied to the soil for raising food for that densely-populated island.

From official returns, it appears there were imported into England from July 1st, 1844, to July 1st, 1845, 137,300 tons of guano. The cost price to the farmers of this manure was estimated at £1,247,600, or over \$6,230,000, spent by British farmers in one year for a manure which was unknown in English agriculture five years previous to that time. A very large per-centage of the fertilising principle of guano is due to the phosphates it contains, derived from the finely-communuted and digested bones of the fish upon which the birds subsisted. So far, then, as the phosphates contained in the guano existed, it served as a substitute for bone manure—notwithstanding the vast importation of the phosphates in the guano—bone manure was 30 per cent. dearer during 1844 and '45 than in the previous year; and I presume there are thousands of farmers in the United States who never even yet have seen, heard, nor read of bone dust as a manure.

There seems to have been some difference of opinion among prominent scientific writers on agriculture, as to what constituted the most valuable fertilising principles of bone manure. One class have asserted that it was wholly due to the inorganic part, the acid and lime, while others attribute nearly, or quite as much value to the organic part, the gelatine, oil, &c., of the bones; but plain common sense teaches us, and this backed up, too, by numerous well-attested facts, that there are soils upon which both the gelatine and the phosphate of lime of the bone manure are useful. On other soils, burned bones, and the mineral phosphate produce equally good results with the unburned or fresh bones; and there are other soils, where neither the organic nor inorganic portions of the bone manure produce any visible good effects, however large the quantity applied.

It has been said that mineral phosphate of lime existed in some parts of Spain in great abundance, and it was thought it might be obtained there in large quantities, so as partially to supply the English farmers with a substitute for bone manure. In 1843, Dr. Daubeny, Professor of Chemistry at Oxford, volunteered to explore the localities in the country where it was said to be so abundant. The phosphorite,

the great object of the journey, was found at a place called Logrosan, in the heart of Estramadura, but so far removed from the coast as to leave small hope of its being possible to export it profitably. However, the doctor was allowed to dig and carry away any quantity he liked. He obtained four mule loads, of 200 lbs. each, which he brought to England, and tried carefully-conducted experiments with it in comparison with several other kinds of manure (twelve kinds in all). The results of his experiment may be found in the London Agricultural Gazette, of April 4th, 1846, in which it will be seen that a given quantity of the phosphorite grew nearly as large crops as the same amount of bone manure; and Dr. D. now says, as "the Spanish phosphorite, which appears to act so beneficially, and is wholly destitute of organic matter, it seems to follow that the more valuable portion, at least of what is applied to the land, when bones are scattered over it, is the phosphate of lime, and not, as some have supposed, the oil, or gelatine."

Some three years ago, Professor Nesbit, of the Agricultural and Scientific School, Kennington, England, was visiting at the highly-cultivated and fertile farm of J. M. Paine, Esq., at Farnham. While rambling over the estate in company with Mr. P., he had pointed out to him many varieties of soils and marls, with which that part of the country abounds. One in particular, a "green marl," was mentioned by Mr. Paine, as being of a singular character. Whenever it came to the surface, the hops and wheat grew luxuriantly, almost without manure, and whenever the other lands were marked with it their fertility was remarkably increased. The professor took samples of it, and after submitting it to a series of most rigid and careful experiments in his laboratory, demonstrated the existence of phosphoric acid equivalent to from 4 to 5 per cent. of bone earth; and says the professor, "an extraordinary amount, and I believe almost unparalleled in the natural or chemical history of soils." And he adds that "bones contain about 50 per cent. of bone earth; so that 10 tons of the dried marl would, in its fertilising effect which is due to the phosphates, be equal to one ton of bones."

I shall experiment with the New-Jersey mineral the coming season, on different soils and crops, and perhaps, if you wish, may favor you with the results. [Favor us with them by all means—we can never be too well supplied with facts.—Eds.]

LEVI BARTLETT.

Warner, N. H., Feb., 1851.

SUPERIORITY OF SHORTHORN CATTLE.

It is well known to most of our readers, that an annual show of fat stock, of all kinds, is held in the month of December, at the Smithfield Market, London, England, which is by far the largest and best of anything of the kind in Europe. That for last December was superior, probably, to any one preceding it. To exhibit in class 8th, the following requisites were necessary:—

"Fattened cows of five years old, and upwards, without restriction as to feeding; yet, the kind, or kinds of food must be certified. Freemartins and spayed heifers are not qualified. 1st prize of £20, (about \$100,) and silver medal to the breeder, and gold medal, as the best cow or heifer in the 7th, 8th, and 9th classes,"

The above prize and medals were won by Mr. Gooch, of Norfolk, on a shorthorn cow five years and three months old. She was fed on linseed cake, (oil cake,) linseed and barley meal, mangold wurtzel, turnips, and hay. This is a kind of feed which does not equal our Indian meal; but as corn is not raised in England, it is too high priced to be fed to cattle, at a profit.

Mr. Moreton, one of the best practical farmers and most able writers on agriculture, in England, and now editor of the *Agricultural Gazette*, thus speaks of the above cow, in his remarks in his paper, on the stock at the Smithfield show; and let it be observed, that he has been an attendant on these shows, and a critical observer for 20 years.

"In class 8th, the prize silver and gold medal for cows went to a shorthorn animal, which eclipses, in our opinion, every beast of the kind in the show, and of any other show of our recollection. The color was, of all others, the most fashionable in a strawberry roan; the head, eyes, ears, and horns, faultless beyond comparison, and the carcass level, compact, and cylindrical, without any approach to equality in any animal of the exhibition. No specimen of a cow ever struck us so forcibly as a prominent type of the necessary character. The touch was soft but not silky, and fleshy without being placed in lumps. Our pleasure is truly sincere in giving this opinion of the animal. The second prize went to a shorthorn cow, of very good points, but completely shaded by the fore-mentioned animal."

When will the farmers of the United States awake to the superiority of this unequalled breed of cattle, and more generally rear them, or the beautiful Devons, instead of the miserable animals that now pervade the country? If

improved horses, cattle, sheep, swine, and poultry were generally reared throughout the country, it would add several millions annually to the value of our agricultural products.

DETERIORATION OF LAND BY IMPROVEMENT OF ANIMALS.

THE thought has sometimes found audible expression, even from respectable sources, that some people were so busily occupied by the improvement of their stock, as to neglect their land, and allow its absolute deterioration. We have had a pretty thorough acquaintance with breeders, both at home and abroad, and so far as our present observation is concerned, have never yet met with the instance, in which the improver of the animal was not also found to be the improver of the soil. We have a further knowledge through reliable publications, and oral testimony, of persons and countries not coming under our own observation, and we venture the assertion, that an instance in proof of the above, can scarcely be found within the entire range of savage and civilised society. Where the general farm stock has been intelligently bred and cared for, by the owner of both land and stock, the soil has invariably participated with the stock, in its improvement. The very presence of the animals on the land, implies this, as the crops are consumed on the premises, and the manure returned to the fields, is more than a compensation for the crops which feed the animals. Look at the countries most distinguished for the improvement of farm stock—England, Scotland, and Holland, and where is so much improvement of soil visible on any other equal surface of the globe?

We do not bring into this question, the partial improvement of some particular quadruped, or one of its families, as of the Arab racer, the Italian grey hound, nor the Dalmatian coach dog. Nor would we admit as illustrating this question, some sporting genius, who had given a very particular attention to an improved lot of fighting cocks, fancy pigeons, fox hounds, or trotting and racing horses; for the very constitution of mind which leads to the indulgence of this partial or morbid taste, disqualifies for the pursuit of the higher and more comprehensive talent, which is embodied in the nobler improvement of the varied utilitarian qualities of farm stock.

We hope the observation which has led to these remarks may not be repeated by intelligent writers, as it affords an excuse for some very good delvers, who are wonderfully painstaking and successful, in raising a fine quantity

of forage, roots, and grain, to feed to the most worthless lot of brutes that were ever suffered to infest Christendom.

CHEMISTRY OF MILK.—No. 1.

THE qualities of milk depend upon several circumstances, namely, the species of animal from which it is obtained, the kind of food from which it is formed, the period during which the animal has been in milk, and the season of the year in which it is given. The quantity of milk depends, also, upon the season of the year, the period the animal has been in milk, and the character of the food with which the animal has been supplied. To these several conditions, which affect the quality and quantity of milk, I may also add rest, exercise, and disease, as holding an important place in the list of causes, and which are important in modifying the character of this secretion.

Some of the causes which affect the milk of animals, it will be perceived, may be substantially controlled, or may be so far controlled, as to exert an important influence upon it, for good or bad; and hence, should be well considered, and well understood, by those who pursue this kind of husbandry. That food modifies the character of milk, is proved by its taste. Onions, leeks, and turnips, together with many other substances, impart their peculiar taste to it, and it is highly probable that there is in the milk, something more than the peculiar aroma of the vegetables I have named, though I believe the substantial change may be much less than that which results from the use of certain kinds of food. It is my object to point out some of these changes in this important nutriment, in a series of articles which I propose to communicate. It is a subject which has received but little attention in this country, and so far as I know, no direct experiments have been instituted to determine the influence of food and circumstances upon its quality and quantity. Another point which I have omitted, is the question in regard to the value of the different breeds of cattle for milk, and especially, their more specific value for the production of cheese or butter. It is true that an approximate value, or an estimated value, is laid upon the several breeds, for the production of milk, and occasionally, for the production of butter. There is, no doubt, decided differences in the breeds for milk, which run through their generations, and is characteristic of them; still, I doubt very much whether their value has been, as yet, really expressed.

I have stated that the quality and quantity of milk depends, in part, upon the species of animal which produces it. There is, however, this fact to be born in mind: The elements of milk are the same in all mammiferous animals, and the difference consists in the proportions in which these elements are combined in the fluid. Milk is always white, is formed, or in other words, secreted, by an organ called the mammary gland, the structure of which is precisely the same in all animals. These glands vary in number from two to many, situated in pairs, upon the abdominal or thoracic face of the animal. There are three important constituents in all kinds of milk, namely, cheese or casein, butter, and sugar; These are held in solution by water, holding in solution, also, a small quantity of soda, which is free, and which may be shown by the green color that is given to a solution of red or purple cabbage. There is also a small quantity of a substance termed extract, which is obtained in combination with sugar. Milk, when dried and burned to an ash, is found to contain phosphates of the earths and alkalies, potash and soda, in combination with chlorine. Phosphoric acid, lime, magnesia, potash, iron, soda and chlorine form the principal elements of the inorganic part, or ash.

The following analyses of milk, by different chemists, I have copied for the purpose of giving a comparative view of the composition of that of different animals:—

	<i>Cow.</i>	<i>Ass.</i>	<i>Goat.</i>	<i>Eme.</i>	<i>Bitch.</i>
Water,	85.70	91.63	86.80	85.62	65.74
Dry matter,	14.30	8.35	13.20	—	34.26
Butter,	4.00	1.10	3.29	4.20	16.20
Casein,	7.20	18.20	4.20	4.51	17.40
Sugar and extract,	2.80	6.08	5.28	4.20	2.90
Salts,	0.62	0.34	0.58	—	1.50

In addition to the foregoing, I may add that of the composition of the milk of the human female, which really forms another variety, differing as it does in the proportions of its elements. Thus it contains

Water,	88.36
Dry matter,	11.64
Butter,	2.53
Casein,	3.43
Sugar and extract,	4.82
Salts,	0.23

In the human female, the butter is reduced considerably, while the sugar is increased in proportion. It comes up in casein to the ordinary standard of the milk of the cow in summer. The casein of the milk of the cow, in the foregoing column, is considerably above the average of summer milk, or that which is made from grass. As I have already stated, the elements of all kinds of milk are the same; the varieties result from a different combination of those

elements. The milk of the bitch, a flesh feeder, is extremely rich in butter and cheese, and very poor, comparatively, in sugar; while, in the ass and goat, the proportion of sugar is large, and the butter small.

Having given a comparative view of the normal compositions of milk, I shall proceed in the next place, to the consideration of the composition of milk as it is determined by a variety of extraneous circumstances, and by the different kinds of food upon which the animal subsists.

E. EMMONS.

Albany, N. Y., Feb., 1851.

The above valuable article, from Professor Emmons, is the first of a series which he will write for the *Agriculturist*. They will be written in as plain and simple a style as it is possible well to use, in order to popularise the subject. We hope our readers will peruse them with attention, and if necessary, study them till perfectly familiar with the language and ideas. This is the only way to progress in knowledge, and he is a dullard who will not take this pains, and deserves the contempt of all enlightened farmers. These observations will apply to other articles which appear from time to time in our journal.

MANAGEMENT OF MANURE OR COMPOST HEAPS.

As the collection of manure is admitted on all hands to be the prime source of agricultural prosperity, I submit the following, on the management of certain matters, with a view to that object:—

The first thing to be attended to is, the selection of a suitable spot for a manure heap. This should be on the top of some rising ground, or on a ground, at least, so level that there can be no run of water to and from it, in case of violent rains. A true regard to economy, will also suggest that it should be placed on some field for which benefit it is mainly intended.

Having marked out the ground, say 25 feet by 15, or any other dimensions suitable to your means, sink stakes three or four inches in diameter, two feet below the surface of the ground, and rising to any convenient height above, at each corner, and at proper distances along the sides and ends. Now collect from the woods, sufficient leaf mould or rich virgin soil to cover the whole space inclosed, one foot deep, laying old rails, or any other material at hand fit for the purpose, along the inside of the stakes, as the mould rises, to confine it within its place. Next, take from the stalls of your animals, (the way

of managing which, will presently be given,) as much manure as will cover this mould all over equally, to the depth of one foot, except the sides and ends, which should invariably be mould only, for at least, six inches from the rails, by which means it will be perceived that the rich and enriching material will be so cased up as to prevent an escape of the gases. Then cover this layer of manure, as soon as may be, in order to prevent loss by evaporation, with mould from the woods, to the depth of six inches, and cover the whole with any kind of straw, as wheat, oat, barley, rye, or buckwheat, one foot deep. This will do much to enrich the surface, at the same time that it prevents injury from the sun and wind. Leaves will do, but straw is much better. [?] Let it stand in this state until your stalls again require cleaning. You will then remove the straw, and spread another layer of manure, except the sides and ends, to the depth of one foot, and over that, a new layer of mould six inches deep, as before, finally replacing the straw as in the first instance. Go on repeating the process till you have got the heap to the top of the stakes; then replace the straw and let the whole stand till required for use, commencing a new heap anywhere else most convenient.

As it may be thought the layers of manure would be too thick, I will now give some directions for the management of the horse stable, cattle stalls, hog pens, &c., from which it is to be taken. Before entering upon this, however, I would pause one moment to remind the reader of what he has been again and again told in this valuable journal, namely, that any animal that is worth keeping at all is, on all accounts, worth keeping well. Probably there is nothing in which the farmer errs so fatally to himself, as in the system of starvation so often pursued, with regard to his poor, suffering brutes. One animal well fed is of more profit in the end, than three half fed; and for the same reasons, the manure from one well fed, is worth all the poverty-stricken droppings of three times its number, half starved. Few things are more evident to reason than these; and yet, there are very few things which some men of intelligence are so slow to receive and act upon. It is with us, respecting animals, very much as with regard to acres; every one is crying "more, more," when, in nine cases out of ten, every individual acquisition is a positive and material loss. It would be difficult to lay down a rule on this subject, of universal applicability. This much, however, may safely be said; if you

want good animals, and good rich manure, (which, if properly managed, will always be a fair compensation for the food consumed in making it,) you must not stint your animals; you must feed as nearly *to the full*, in quantity and quality, as you can without waste.

Another rule highly necessary to success in manufacturing manure is, that every animal on a plantation should be housed at night, the year round; and in winter, by day, except so much time as is necessary for them to get water, and take sufficient exercise. In very cold weather, they should be let out only to get water, and then immediately be put up again. This is the writer's own rule, and he finds it works well in every case, except in regard to hogs, which, for some reason, do not appear to bear confinement in the day time, in this climate. This practice is rare at the south. If there is another instance of it in North Carolina, he is not aware of it. The advantages of it, however, are obvious, and sooner or later it will be adopted by all.

Into the stalls of these animals, before they are allowed to enter, mould should be thrown, to the depth of one foot. As soon as this has become saturated, a mixture of virgin soil, leaves, and old logs, sufficiently decayed to break up finely, together with the scrapings from beneath and around them, should from time to time be added in sufficient quantities to keep all dry and comfortable. A little shelled corn thrown into the stalls and pens, will induce the hogs to root, and mix up the whole together, in the best manner, at no cost. When the accumulation has become too great for convenience, let it be taken out and put upon the pile, as above directed. Before the animals are again put in, throw mould, as at first, or any material fitted to absorb and retain the urine and juices, to the depth of one foot. From this, it will be seen that no manure goes into the pile in a state tending to waste. When required for use, the pile is cut down perpendicularly, and as evenly as possible, in order to pulverise it well, and make the whole mixture equal.

The writer has now pursued this plan to a greater or less extent for several years. Its advantages are, that it saves the expense of all tedious preparations to prevent the escape of fertilising matter. It is adapted to every man's capacity, and every man's means. Nothing is ever seen escaping from one of these piles—no ammonia on a damp or frosty morning ascending like smoke from a furnace—a case so com-

mon where the contents of stables are thrown out without any admixture to absorb it. The rain never falls in more than sufficient quantities to afford the necessary moisture, while the straw always to be kept on top, is an effectual protection from sun and wind. Its tendency to promote the health and thriftiness of the animals must be obvious. Their stalls are always sweet and comfortable. Of course, this plan also saves the expense of building manure houses. Its superiority to the mode of managing these matters commonly recommended, that is, hollowing out the barn yard into the form of a ditch, and throwing the manure into it to be washed away and wasted by rain, wind, and sun, will readily appear. Animals should not be permitted to run in a barn yard except in going to and from their places of confinement; and to prevent any loss from this, it should be kept constantly covered with mould, leaves, straw, &c., which, once or twice a year may be scraped up to put on the heap between the layers of manure.

There are numerous other sources from which materials may be drawn to augment and enrich these heaps, such as weeds, the scrapings of garden walks, the contents of privies, fowl and pigeon houses, rotten chips, sawdust—a capital thing to throw into pigsties and cow stables—old rags, hog's hair, coal ashes, soap suds, dish water, urine from the chambers, which may be poured upon them daily, and last, though not least, corn cobs. These are sadly wasted at the south. Give a really good manager 10 acres of land, and the corn cobs that are burned, or thrown away upon some of our large southern plantations, and I verily believe, though as poor as poverty at the outset, he would in a few years become a very comfortable liver. By this plan, these will of course be preserved. Where corn is fed to hogs and horses in the ear, the cobs will be mixed up with the materials under foot where they are finally thrown; when shelled for family use, or other purposes, they should be carefully gathered up, and thrown upon the barn yard or into the hog pens.

A person who has not tried this plan, could hardly conceive how large a mass of rich fertilising matter may thus be collected in the course of a year from a very few animals, and how greatly, if well followed up, it will add to the value of landed property. It is well known that the whole mass by lying a sufficient time, and at last thoroughly mixed together, will become nearly as valuable as so much raw stable manure. While a place along side of it of equal, perhaps far greater original value, is

going perceptibly and rapidly to ruin, the one on which this, or some better system is pursued, will be quite as rapidly improving in beauty, fertility, and the various means of comfortable living. The garden, which at first produced scarcely anything eatable, begins to send forth daily its stores of the finest vegetables; the fields, which produced only sedge grass, and that with much ado, become loaded with yearly increasing crops of grain; bare, unsightly patches are clothed with rich verdure; the orchard, renewed and invigorated, teams with fruit sweet to the taste, healthful to the body, and delightful to the eye; everything looks cheerful, smiling, and happy. The very animals participate in the general blessing. Their glossy hides, their sportive motions, their indolence, and their ease testify their comfort, and the enjoyment they find in the abundance they have thus been made instrumental in creating around them.

T. S. W. MORT.

Belvoir, N. C., Feb. 18th, 1851.

Although the above admirable article was written for the latitude of North Carolina, it will suit, with slight modification, that of every state in the Union. The method of managing manure and muck heaps is one of the best we have ever seen; and what most highly recommends it, is, that it can be practised by the poorest, as well as the richest, and equally suit the man of a few acres or many. Those who have not plenty of straw or leaves from the woods to mix with their compost heaps, will do well to use plaster, charcoal dust, or sawdust. Plaster can always be had; and a peck of it to a cubic yard of compost, is quite sufficient to fix the ammonia and retain all the fertilising gases in the manure heap.

GREAT VALUE OF GUANO.

IN proof of this, Captain Buller, of the English navy, lately made the following communication to the Royal Agricultural Society:—He instanced the example of a farm in his own hands, consisting of 80 acres of poor land, for the most part lately reclaimed from heath, and rented at 6s. per acre. For six years past, the whole of the grain and hay together, with about 80 tons a year of mangold wurtzel, carrots, or potatoes had been removed from this ground, and not a particle of any kind of manure restored or used, except guano and a little marl applied to the lightest ground, and ten loads of dung per acre, applied in one of the six years to three acres of potatoes. The white turnips have always fed

upon the ground; but everything else has been taken to a barn two miles distant. During the whole of these six years, the crops upon this land have been steadily increasing. Land, which, six years ago, was not of itself capable of producing ten bushels of barley per acre, will now produce from 30 to 40. Captain Buller stated that he applied guano to all the root crops, at the rate of about 5 cwt. per acre, for mangold wurtzel or carrots, which were to be taken off, and at the rate of 3 cwt. for white turnips. That he took five crops in four years, and that he considered he had grown this year, 140 tons of mangold wurtzel and carrots from seven acres of land.

BONE DUST AS MANURE.

WE unhesitatingly concede to guano the first rank among manures. To this, it is entitled by its holding *all* the required elements of vegetable food in a just combination, and these in the most available condition for assimilation by the growing plant. And without any question, next to guano, do we place bone dust. This, it is true, has not generally all the elements required for the full development of vegetable life, as is always the case with boiled or burnt bones, and such as have long been buried or exposed to the weather; yet, if still retaining the oil and fatty matter, the fibrine and other nitrogenised substances, so intimately blended in recent bone, it holds every material which constitute, by their varied association, the rich compounds afforded by the Peruvian guano.

The filings and sawing, such as is furnished by the button and other valuable manufactures of bone, are of this description. Nothing but sound, recent, healthy bone will suffice for this purpose, and it is the dust shavings derived from these fresh materials, that are fully entitled to the high merit of approaching to a successful competition with guano. The principal difference consists in this: That the various compounds of ammonia are already found in guano, and are prepared at the instant of contact with the soil, and yield up their substance to the claims of vegetable life, while those of the bone dust must first undergo decomposition in the soil before its value is felt. This, in the crude, unbroken bones, requires long years, perhaps a century or more, to effect; and the period is lessened in proportion as they have been artificially comminuted or broken up. In the filings, &c., above specified, this division of their particles has reached the utmost artificial limits. Nothing but the bringing into play the latent

chemical affinities of the multifarious elements of bones, can effect a further reduction or disassociation of their particles. This may be done, to a certain extent, with sulphuric and other acids, but far more economically by first mixing with the miscellaneous muck heap, and then with the soil. It is not so material, however, in what way, nor how associated, bone dust may finally reach its mother earth. When sufficiently reduced and mixed with the soil, its effects will be speedily and most beneficially felt.

The efficacy of bones has been long known and is now generally appreciated by all intelligent agriculturists. Mr. Palin says, "for pasture land, and especially the poorer kinds, there is nothing equal to bone manure, either as regards the permanency of its effects, or the production of a sweet luxurious herbage, of which all cattle are fond. Many thousand acres of the poor clay soils have been covered with this manure during the last eight or ten years." Many instances of the application of bones have been afforded in England, where the produce of old pastures have been augmented fully 300 per cent.; and an almost worthless production of weeds and rough grasses has been succeeded by a sweet succulent herbage, highly relished by animals. One English writer in the Royal Agricultural Journal says: "I have known many a poor, honest, but half-broken man raised from poverty to comparative independence, and many a sinking family saved from inevitable ruin, by the help of this wonderful manure." But it is useless to multiply testimony on this subject, as the value of this fertiliser is now fully appreciated by all intelligent farmers.

Our present object is to show to the initiated as well as the inexperienced, the large proportion of phosphoric acid, which is really the most important portion of the bone, which enters into many of our leading crops. It has long been known that the herbage in our pastures, clover, wheat, potatoes, turnips, corn, and many other of our products are largely benefitted by bones, but the really large proportion of phosphoric acid entering into their composition has seldom been understood, except to the more scientific reader.

Phosphoric acid consists of phosphorus 44, and oxygen 56 in every 100 parts. Phosphate of lime, or bone earth, is composed of phosphoric acid, combined with lime, in the proportion of 48½ per cent. of the former to 51½ per cent. of the latter.

Bones in their recent state vary as to the age of the individual and the species of animal

from which they are taken. The bones of all young animals consist of a much larger proportion of albuminous or nitrogenised matter, and consequently a less amount of phosphate of lime, having more the consistency of gristle, which, in advancing age, gives place to a larger quantity of phosphate of lime; thus rendering it brittle, and peculiarly liable to fracture. We often hear of a broken limb from the slightest fall of a person in advanced years, while a child often drops harmlessly from the eaves of a three-story house. The great disproportion of elastic, sinewy, albuminous matter, therefore, constitutes the real difference between the two.

The bone of the ox has been analysed by Berzelius and many other reliable chemists. The bones lost 38 per cent. by calcination, all of which is animal matter. Before calcination, they contained of

Phosphate of lime,	55.36
Fluate of lime, (Derbyshire spar,)	3.00
Carbonate of lime,	3.85
Phosphate of magnesia,	2.05
Soda, with some common salt,	2.45
Cartilage,	33.30
	<hr/>
	100.00

Fourcroy and Vauquelin found some ox bones contained of

Gelatine and oil,	51.0
Phosphate of lime,	37.7
Carbonate of lime,	10.0
Phosphate of magnesia,	1.3
	<hr/>
	100.0

The relative proportions of the constituents of bones are continually varying according to the age, variety, and even the condition of the same animal. But however they may differ, we have the assurance that any particles of matter entering into them will be of the highest utility as a fertiliser for maturing future crops.

In the following estimates of phosphoric acid, it must be borne in mind, that the proportions, like those constituting bones, vary materially with the different specimens analysed, with the age of the specimen, the circumstances under which it has been grown, and to some extent, with the variety subjected to analysis. These estimates were made by Messrs. Way and Ogston, and are entitled to our highest confidence.

The proportion of phosphoric acid varied in

the ash of the seed of oats from 18.3 to 29.16 per cent.

Straw and chaff,	2.86	to	7.02	per cent.
Seed of barley,	25.32	"	38.26	"
Straw,	3.24	"	7.20	"
Seed of maize, or Indian				
Corn,	—	"	53.69	"
Stalks and leaves,	—	"	8.09	"
Pith of cob,	—	"	4.37	"
Seed of wheat,	40	"	49	"
Roots of the red carrot,	—	"	12.31	"
Leaves,	—	"	6.21	"
Leaves and head of cow				
cabbage,	—	"	12.53	"
Stalk,	—	"	19.57	"
Flowers of hops,	—	"	17.33	"
Leaves,	—	"	9.33	"
Seed of white mustard,	—	"	44.97	"
Seed of turnip,	—	"	40.17	"
Straw of flax,	7.53	"	8.48	"
Seed,	35.99	"	41.09	"
Potato tubers,	15.10	"	17.68	"
Potato haulm,	2.27	"	6.62	"
Various grasses,	6.25	"	12.07	"

In the absence of a full supply of other manures, if any of our farmers omit using bone dust on their crops, when it can be procured at a fair price, after fully understanding its value, we say they ought to be independent in their income, irrespective of profit on their crops.

ADVANTAGES OF SYSTEMATIC ARRANGEMENT.—

It is well known, that in domestic economy, good housekeepers do actually derive this incidental advantage from a day of rest through the week: One day is devoted to washing; one to ironing; one to cleaning house; one to mending; one to baking; so that by Saturday night, everything is brought to a comely state. None of these things are left for the approaching week. Everything is arranged and in order, as if she did not expect to live another week. Men should do the same on their farms. If they did, they would thrive and prosper—*Blake's Farmers' Every-Day Book*.

WHO CULTIVATES SAINFOIN IN THE UNITED STATES?—We should be glad to hear of some one who raises this valuable crop—almost invaluable on strong calcareous soil—and the result of their trials. An English farmer says he has often stopped the scours in his young stock by turning them on a field of sainfoin aftermath (second crop); and that this has often effectually checked the disease when nothing else would.

Ladies' Department.

THE FARMER.

Of all pursuits by *men* invented
The plowman is the best contented;
His calling's good, his profit's high,
And on his labors *all* rely;
Mechanics all by him are fed,
Of him, the merchants seek their bread;
His hands give meat to everything
Up from the beggar to the king.
The milk and honey, corn and wheat
Are by his labors made complete;
Our clothes, from him must first arise,
To deck the fop, to dress the wise.
We then by vote may justly state
The farmer's rank among the great;
More independent than them all,
Who dwell upon this earthly ball.
All hail! ye farmers, young and old,
Push on your plow with courage bold;
Your wealth arises from your clod,
Your independence from your God.
If, then, the plow supports the nation,
And men of rank in every station,
Let kings to farmers make a bow,
And every man procure a plow.

H. N. W.

Poplar Ridge, Cayuga Co., N. Y.

SMALL SWEET COURTESIES OF LIFE.

THE following excellent advice was given by the late William Wirt to his daughter, and may be read with profit by every female or lady in the land:—

"I want to tell you a secret. The way to make yourself pleasing to others, is to show that you care for them. The whole world is like the miller at Mansfield, 'who cared for nobody—no, not he—because nobody cared for him.' And the whole world will serve you so, if you will give them the same cause. Let every one see, therefore, that you do care for them, by showing them what Sterne so happily calls 'the small sweet courtesies of life,' those courtesies in which there is no parade, whose voice is too still to tease, and which manifest themselves by tender and affectionate looks, and little kind acts of attention; giving others the preference in every little enjoyment, at the table, in the field, walking, sitting, or standing. This is the spirit that gives to your time of life, and to your sex, its sweetest charms. It constitutes the sum total of all the witchcraft of woman. Let the world see that your first care is for yourself, and you will spread the solitude of the upas tree around you in the same way, by the emanation of a poison which kills all the juices of affection in its neighborhood. Such a girl may be admired for her understanding and accomplishments, but she will never be beloved.

"The seeds of love can ever grow under the warm and genial influence of kind feelings and affectionate manners. Vivacity goes a great way in young persons. It calls attention to her who displays it; and if it then be found as-

sociated with a generous sensibility, its execution is irresistible."

TO MAKE GREEN SALVE.—Take freshly-gathered white lily flowers, broad-leaved, common plantain, and chickweed, each, as much as can be grasped in a man's hand; one pound of newly-churned butter, without salt; one pound of mutton suet, melted and strained; one pound of bees wax; and one pound of rosin. Melt the suet and butter together, and boil in them the herbs, until the juice is all extracted; then strain through a cloth, and add the rosin and wax. When melted and well mixed, strain again into a queens-ware or earthen pan, and stir till cold, to prevent separation. An excellent cooling and healing salve for wounds and burns. M.

TO IRON SILKS.—Silk cannot be ironed smoothly so as to press out all the creases, without first sprinkling it with water, and rolling it up tightly in a towel—letting it rest for an hour or two. If the iron is the least too hot, it will injure the color, and it should first be tried on an old piece of the same silk. Bright-colored silks or ribbons, such as pink, yellow, green, &c., always change color on the application of an iron. Black, brown, olive, grey, &c., generally look very well after ironing. Silks should always be ironed on the wrong side.

EDGEWOOD PUDDING, OR DESERT CAKE.—With a moderate-sized coffee cup of sugar, beat four eggs, and then add two cups of molasses, and continue the beating until well done. Of flour sifted light, add five cups; butter melted, one cup; sweet milk, one cup (if half cream it is none the worse); one teaspoonful dissolved in warm water, of carbonate of soda, or saleratus will do, and one small tablespoonful of ginger. Mix well, and bake in the same manner as you would pound cake. Serve hot or cold, for desert or tea, with or without sauce.

GLENWOOD CAKE.—Substitute loaf sugar in place of the brown, as in the above recipe, and clean syrup in place of molasses, and a nutmeg for the ginger, and you have a light-colored cake, quick made, very good, and not so rich as to give the dyspepsia to everybody that eats of it.

GLENWOOD WAFFLES.—Beat two eggs, and add a pint and a half of milk; a little salt, and a pint each of flour and cold boiled rice; beat up the whole into a smooth batter and bake to a crisp.

Foreign Agricultural News.

By the steamer Asia we are in receipt of our foreign journals to the 1st inst.

Cotton advanced again, and had got back to about the same prices as per our last. Most other American products remained with little or no change.

The Shantung Cabbage.—A correspondent at Shanghai, writes to a gentleman in England, that he is about to send him some seeds of the Shantung cabbage, which one of the French missionaries had procured in the north of China. He says that it somewhat resembles the Savoy in appearance, is of a delicious flavor, and weighs 60 lbs. It is supposed that July or August is the right month for sowing.

To Accelerate the Germination of Seeds.—When a gardener has some choice and scarce seeds, or when he is endeavoring to raise a particularly early crop, he takes more than ordinary care with them. He selects some good soil, sows his seeds, waters them enough, but not too much, and takes the greatest care to fit all the conditions to the nature and requirements of the young plants. If he is anxious to hurry on the germination of the seeds, so as to bring the young plants forward as rapidly as possible, he gives them a little bottom heat, sowing the seeds in fine mould resting on half-rotten dung, because, under those circumstances, the gentle heat of the still fermenting manure, and the vapors which it gives out, are highly favorable to the germination of the seeds. This is one of the best known modes of raising young plants; for notwithstanding all that has been said about seed steeping and other wonderful modes of accelerating the growth of plants, we have, at the present time, no more powerful mode of aiding germination, and forcing the growth of young plants. This is the plan adopted by the best gardeners with their choicest seeds.—*Gardeners' Chronicle.*

The World's Exhibition.—Her Majesty's Commissioners have made the following regulations respecting the admission of visitors:—The exhibition will be open every day, Sundays excepted. The charges for admission will be as follows:—Season ticket for a gentleman, £3 3s.; for a lady, £2 2s. These tickets are not transferable, but they will entitle the owner to admission on all occasions on which the exhibition is open to the public. The commissioners reserve to themselves the power of raising the price of the season tickets when the first issue is exhausted, should circumstances render it advisable. On the first day of exhibition, season tickets only will be available, and no money will be received at the doors of entrance on that day. On the second and third days, the price of admission on entrance will be (each day,) £1; on the fourth day of exhibition, 5s.; to be reduced on the 22d day to 1s. From the 22d day, the price of admission will be as follows:—On Mondays, Tuesdays, Wednesdays, and Thursdays in each week, 1s.; on Fridays, 2s. 6d.; on Saturdays, 5s. No change will be given at the doors. This regulation is necessary to prevent the inconvenience and confu-

sion which would arise from the interruption or delay at the entrances. The progress of parcelling off the allotments of each nation is now progressing rapidly. The first consignment which has been received for exhibition, is a milliner's box, containing two caps of a novel pattern. Upwards of £100 were taken at the door on a day for the admission of visitors, and the receipts are said to be steadily on the increase, so great is the curiosity to examine the inside of the "Crystal Palace."

The Pine and Cedar Forests of California.—Of all the wonders I have ever seen in the vegetable kingdom, nothing will bear comparison with the magnificent and lofty growth of cedars and pines which embellish the hills and mountains that lead to, and make up the great Sierra Nevada range. The magnificence and grandeur of scenes in which these trees abound, cannot be imagined by any man who has not seen them, and felt the awe and sublimity to which they give rise. I have counted in a circle of 50 feet in diameter, 13 pine trees, not one of which was less than three feet in diameter, nor less than 250 feet in height, nor was any of them marked by the slightest curve or inclination. They are the inimitable and lofty monuments of nature, uninfluenced by sweeping storms and winds, unbent and undecayed by a centurian age. Not a limb nor a knot can be found upon their bodies until you reach an altitude of from 100 to 200 feet, beyond which height they continue to grow until their towering majesty over-awes all surrounding objects, and affords a fit refuge for the noble bird which adorns the banner of the country. No man can travel through these scenes without feeling that the grandeur of Omnipotence itself is teaching him his finite and insignificant powers. Such was the moral influences of these leviathan growths of cedars and pines upon my mind, I would not have dared have given entertainment to a fugitive thought against the supremacy, wisdom, and power of Jehovah. Such are the pine and cedar forests of California. And when you reflect that they cover an area of hundreds, if not thousands of square miles, you are prepared to admit the importance of this claim, which we would urge upon the consideration of our friends.—*Toronto Globe.*

Grease for Carts, &c.—The following composition is recommended by a writer in the "Independence Belge," for greasing carts and other agricultural implements:—Take 4 lbs. of India rubber, dissolved in a proper liquid, 1 lb. of gelatine, 10 lbs. of carbonate of soda, 45 quarts of animal or vegetable oil, and as much water; boil the water with the carbonate of soda and gelatine, then add the India rubber and the oil, stir the mixture well until it forms a homogeneous liquid. The above proportions may be varied, and if the India rubber and oil are previously purified, the carbonate of soda is unnecessary. The above mixture will be found very useful not only for greasing carts, &c., but also for keeping the farm harnesses in order.—*Flore des Serres.*

Editors' Table.

THE FARMERS' CLUB, of the American Institute, have appointed Tuesday, the 1st day of April, at 12, M., for the discussion of Indian Corn, and the preparation of it for food. Also, Tuesday, the 8th day of April, for the discussion of cattle of the various breeds, and the best method of breeding. Persons interested are invited to attend at the Repository of the Institute, 351 Broadway.

AN AGRICULTURAL TRUTH.—He who is within scent of a dunghill smells that which his crops would have eaten, if he had permitted it. Instead of manuring his land, he manures the atmosphere, and before his dunghill is finished turning, he has manured another parish, and perhaps another country.—*Arthur Young.*

YOUNG ON THE STRUCTURE AND THE DISEASES OF THE HORSE, with their remedies, brought down to 1849, by W. C. Spooner; to which is prefixed an account of the breeds of the United States, compiled by Henry S. Randall. Derby & Miller, Auburn, N. Y. Any one at all conversant with that noble animal, the horse, is well aware of the merits of Young's admirable work on this subject. Mr. Spooner, a veterinary surgeon of high standing, wrote a valuable supplement for the late English edition, bringing the science down to 1849. This, Mr. Randall, with excellent judgment, has incorporated into the body of the volume before us, in footnotes, under the different appropriate heads of the work. We think this quite an improvement on the English edition. Mr. Randall's part of the work is well done; and as the publishers have brought it out in handsome style, we trust the book will have a large sale.

MODELS OF FRUIT.—We have never seen so fine life-like specimen of modelled fruits as were recently shown us by Mr. T. Glover, of Fishkill Landing, N. Y. They did not represent the faultless fancy sketch so often shown by artists, but like Cromwell's leathern face, with the mask fully developed, they showed the dents and defacements incident to the peculiar fruit illustrated. A bystander, to whom we offered one, very gravely put it to his nose to detect the delicious odor such tempting specimens yield. This art is capable of subserving the advancement of horticulture in various ways; and to its votaries, we most heartily commend the specimens and the artist by whom they have been furnished. Samples of them may be seen at our office.

SALE OF MR. MORRIS' SHORTHORN STOCK.—By reference to the advertisement page 135, it will be seen that Mr. Lewis G. Morris, of Mount Fordham, Westchester county, is to have a large sale of grade and thorough-bred short horn stock. These animals have been bred with direct reference to great milking qualities, in which Mr. M. has been particularly successful. The grades are mostly, if not all, crossed with celebrated Dutch milking stock. Quite a number of similar-bred animals were sold by Mr. M. at his great sale in the autumn of 1849; and we are informed that generally, those who then purchased, are highly gratified with the great milking properties of the cows then obtained. Mr.

Morris imported last year several high-bred shorthorns, from the celebrated herd of the late Thomas Bates, Esq., of Yorkshire; he has also imported a few fine Devons: and a small flock of choice Southdown sheep, bred by the celebrated Jonas Webb, of Babraham, England.

THE SOIL OF THE SOUTH.—This is a new work just started at Columbus, Georgia, 16 pages quarto, monthly, price one dollar a year, Charles A. Peabody, Esq. and Col. James M. Chambers, the supervisory editors, assisted by quite a number of highly talented and practical planters. Col. Chambers is the publisher. We like the first number of this paper very much; it is spirited, practical, and common sense, which is all that is required to make periodicals of this class. We have no doubt it will exercise a highly beneficial influence on the agriculture of the south, and it has our best wishes for its success. If planters and farmers would read fewer political papers and more agricultural, it would be infinitely better for them, both in an intellectual and pecuniary point of view.

CATTLE.—By Youatt and W. C. L. Martin, being a treatise on their breeds, management, and diseases, comprising a full history of the various races; their origin, breeding, and merits; their capacity for beef and milk; the nature and treatment of their diseases; the whole forming a complete guide for the farmer, the amateur, and the veterinary surgeon; with 100 illustrations. Edited by A. Stevens. New York: C. M. Saxton. pp. 470. 12mo. Price, in muslin, \$1.50. This useful and much-needed work, announced some time since as in preparation, very opportunely has come to hand. We need not reiterate our opinion of the capabilities of the editor, nor of the service the publisher is doing to his countrymen in issuing similar works. Of these, the reader must already be aware. Suffice it to say, the book is neatly and handsomely got up, and is just the thing a majority of our farmers require. There is one feature, however, in the work, that is new, and to which we will briefly allude. The author, in the treatment of diseases has adopted the system of Hahnemann, called "homœopathy," which is based on one general law, *similia, similibus curantur*; that is, "like cures like," or in other words, "a system of medicine, which cures diseases by such agents as produce similar symptoms, when taken by an individual in health." These medicines are given in extremely small doses, one of which is administered at a time, and the substances employed must be perfectly pure. The medicines are prepared by able chemists in this city, and may be had on reasonable terms.

IMMIGRANTS continue to pour into New York from abroad in great numbers. Let them come, but in the mean time let measures be taken by an organised company with either public or private means, to send them out of the city, to make them cultivators of the soil, instead of drones and depraudators upon the industry of the people. Help them out to the vast territories of fertile soil in the west, and teach them there to help themselves. They will soon become producers instead of consumers.

Review of the Market.

PRICES CURRENT IN NEW YORK, MARCH 18, 1851.

ASHES, Pot.....	100 lbs.	\$5.37	@	\$5.62
Pearl.....	do.	5.69	"	5.75
BALE ROPE.....	" lb.	9	"	11
BARK, Quercitron.....	" ton.	33.00	"	35.00
BEANS, White.....	" bushel.	75	"	1.50
BEEFWAX, American, Yellow,	" lb.	20	"	26
BOLT ROPE.....	" "	11	"	12
BONES, Ground.....	" bushel.	45	"	55
BRISTLES, American.....	" lb.	25	"	65
BUTTER, Table.....	" "	15	"	25
Shipping.....	" "	9	"	15
CANDLES, Mould, Tallow.....	" "	10	"	13
Sperm.....	" "	25	"	30
Stearine.....	" "	25	"	30
CHEESE.....	" "	5	"	10
COAL, Anthracite.....	2,000 lbs.	5.50	"	6.00
CORDAGE, American.....	" lb.	11	"	13
COTTON.....	" "	10	"	14
COTTON BAGGING, Am. hemp,	" yard.	15	"	16
FEATHERS.....	" lb.	27	"	40
FLAX, American.....	" "	8	"	9
FLOUR, Sour.....	" bbl.	3.62	"	4.12
Ordinary.....	" "	4.18	"	5.00
Fancy.....	" "	5.25	"	6.75
Buckwheat.....	" "	—	"	—
Rye.....	" "	3.87	"	4.00
GRAIN—Wheat, Western.....	" bushel.	1.00	"	1.20
" Red and Mixed.....	" "	90	"	1.10
Rye.....	" "	77	"	79
Corn, Northern.....	" "	67	"	70
" Southern.....	" "	66	"	68
Barley.....	" "	1.10	"	1.25
Oats.....	" "	48	"	53
GUANO, Peruvian.....	2,000 lbs.	47.50	"	50.00
Patagonian.....	do.	—	"	40.00
HAY, in Bales.....	" 100 lbs.	60	"	70
HEMP, Russia, Clean.....	" ton.	225.00	"	230.00
American, Water-rotted,	" "	160.00	"	200.00
" Dew-rotted.....	" "	140.00	"	175.00
HIDES, Southern, Dry.....	" "	10	"	11½
HOPS.....	" lb.	6	"	35
HORNS.....	" 100.	2.00	"	10.00
LEAD, Pig.....	" 100 lbs.	4.77	"	5.00
Pipes for Pumps, &c.....	" lb.	5	"	7
LARD.....	" lb.	7	"	8½
MEAL, Corn.....	" bbl.	3.00	"	3.37
MOLASSES, New-Orleans.....	" gallon.	29	"	31
MUSTARD, American.....	" lb.	7½	"	9
NAVAL STORES—Tar.....	" bbl.	1.75	"	2.00
Pitch.....	" "	1.25	"	1.75
Rosin.....	" "	1.15	"	1.30
Turpentine.....	" "	2.44	"	2.87
Spirits of Turpentine.....	" gallon.	35	"	37
OIL, Lined, American.....	" "	75	"	80
Castor.....	" "	1.05	"	1.15
Lard.....	" "	65	"	75
OIL CAKE.....	" 100 lbs.	1.25	"	1.50
PEAS, Field.....	" bushel.	75	"	1.50
Black-eyed.....	" 2	1.75	"	2.20
PLASTER OF PARIS.....	" ton.	2.50	"	3.25
Ground, in Barrels of 300 lbs.	" "	1.12	"	1.25
PROVISIONS—Beef, Mess.....	" bbl.	8.00	"	11.00
" Prime.....	" "	4.00	"	6.00
" Smoked.....	" lb.	6	"	12
" Rounds, in Pickle.....	" "	4	"	6
Pork, Mess.....	" bbl.	10.00	"	13.00
" Prime.....	" "	6.50	"	10.00
Bacon Sides, Smoked.....	" "	3	"	4½
" in Pickle.....	" "	3	"	4
Hams, Smoked.....	" "	5	"	9
" Pickled.....	" "	4	"	7
Shoulders, Smoked.....	" "	4	"	6
" Pickled.....	" "	3	"	5
RICE.....	" 100 lbs.	3.00	"	3.63
SALT.....	" sack.	1.00	"	1.60
Common.....	" bushel.	20	"	35
SEEDS—Clover.....	" lb.	6½	"	9½
Timothy.....	" bushel.	2.00	"	4.00
Flax, Rough.....	" "	1.60	"	1.70
SODA, Ash, (60 per cent. soda),	" lb.	3	"	—
Sulphate Soda, Ground.....	" "	1	"	—
SUGAR, New-Orleans.....	" "	5	"	8
SUMACH, American.....	" ton.	35.00	"	37.00
TALLOW.....	" lb.	7	"	8
TOBACCO.....	" "	5	"	15
Eastern, Seed-leaf.....	" "	15	"	20
Florida Wrappers.....	" "	15	"	60
WHISKEY, American.....	" gallon.	23	"	24
WOOLS, Saxony.....	" lb.	50	"	60
Merino.....	" "	40	"	50
Grade Merino.....	" "	30	"	40
Common.....	" "	20	"	30

REMARKS.—Barley is the only article of any moment that has changed in price since our last; and this has risen about 20 per cent.

The Weather has been unusually mild for the season, with copious rains. At present, the ground is covered with a considerable depth of snow.

TO CORRESPONDENTS.—Communications have been received from H. B. Rogers, Asa Snyder, C. H. Cleveland, John R. Page, D. H. Sherwood, J. R. Strate, J. B. D., Sampson Duffee, W. R. W. Field, Samuel Allen, R. Linsley, Gray, E. W. Farnham, B. Webster, Augustus, A Member of an Agricultural Society, T. S. Gold, James S. Laurence; also a paper on the Practical Utility of the Study of Entomology to the Farmer.

Construction of Ice Houses.—S. A. C.—See a paper on this subject at p. 23 of our seventh volume.

Characteristics of the Varieties of Indian Corn.—C. Greenport, N. Y.—The number of rows is not always characteristic of the variety of corn. Like many other cultivated plants, it is liable to "sport," or vary. Generally speaking, the King-Phillip or eight-rowed yellow corn, when cultivated in the same climate, is uniform in the number of its rows.

Garlic in Milk.—J. J. P.—We know of nothing that will remove the taste of garlic from milk without injuring its quality.

ACKNOWLEDGEMENTS.—Journal of the American Institute, devoted to the Promotion of Agriculture, Commerce, Manufactures, and the Arts; an Address delivered before the Plymouth-County Agricultural Society, at their Annual Exhibition at Bridgewater, Mass., in September last, by Charles T. Jackson, M. D., Chevalier de la Legion d'Honneur; Premiums and Gratuities awarded by the Massachusetts Horticultural Society, for 1850; Transactions of the Essex (Mass.) Agricultural Society for 1850.

GREAT SALE OF SUPERIOR, THOROUGH-BRED SHORTHORN CATTLE.—The subscriber having more stock than can well be sustained on his farm, will offer at public auction, about 30 head of his Improved Shorthorn Cattle, consisting of bulls, cows, heifers, and heifer and bull calves, on the 26th day of June next, at his farm, 2½ miles from this city.

It is known to breeders of improved stock in this country and in Canada, that the proprietor of this herd, during the past 12 years, has, through the medium of importation from England, and selections from the best herds in this country, spared no expense to rear a herd of cattle from which superior animals could be safely drawn, for the improvement and crosses of other herds.

His importations have been derived from that eminent breeder, the late Thomas Bates, Esq., of Kirkcaldington, Yorkshire, England, which herd, it is well known, has recently been disposed of at public sale, by his administrators, and dispersed in many hands, and can no longer be resorted to, as a whole, for improvement. The announcement of this sale created great interest in the minds of all shorthorn breeders in England, who seemed desirous to secure one or more of these animals to mingle with the blood of their herds. At the day of sale, there was found assembled, the largest audience ever before witnessed upon a similar occasion, numbering, as it was said, from 4,000 to 5,000 persons. Among them were the best breeders in England, and several from other countries. Some of the animals brought prices which seemed incredible to many.

In the herd now offered for sale, will be included the imported bull Duke of Wellington, and the premium bull Meteor. These are Bates' bulls, and their reputation, as stock getters, are too well known to need comment. I am, however, authorised, by Lewis F. Allen, Esq., of Black Rock, one of the most prominent breeders in this country, and who has had ample means for forming a judgment, "that in no instance, to his knowledge, has these two bulls been bred to shorthorn cows of other herds, previously imported into the United States, but what the produce were superior, in general qualities, to such herds."

Most of the stock which is now offered for sale has been bred from these two bulls. The proprietor having a young bull more remotely connected with the portion of the herd, which he retains, being about 14 in number, he can part with these two valuable bulls. There will be in the stock offered for sale six young bulls, from eight months to about two years old, in addition to the two named above. The remainder of the stock will be composed of cows, most of them possessing extraordinary milking qualities, heifer, and heifer calves, all fine in symmetry and good handlers.

It is believed that no herd of shorthorns has ever been offered for sale in this country exhibiting more of the valuable combination of qualities which contribute to make up perfect animals.

A catalogue containing the pedigrees of these animals will be ready for delivery at an early period, in which the terms of sale will be fully stated. A credit will be given from 6 to 18 months. Gentlemen are invited to examine the herd at their convenience.

mar GEO. VAIL, Troy, N. Y.

CHEMISTRY Made Easy, for the Use of Farmers. By J. Topham, M. A. Price 25 cents. C. M. SAXTON, 123 Fulton st., N. Y.

THE AMERICAN LIVE-STOCK INSURANCE COMPANY, Vincennes, Indiana.

Charter Unlimited. Granted January 2d, 1850.

CAPITAL \$50,000!

For the Insurance of Horses, Mules, Prize Bulls, Sheep, and Cattle, of every description, against the combined risks of Fire, Water, Accidents, and Disease.

Losses paid in 30 days after proof of death.

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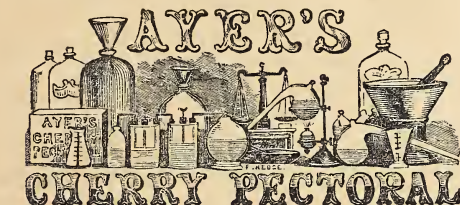
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AYER'S CHERRY PECTORAL

For the Cure of
COUGHS, COLDS, HOARSENESS, BRONCHITIS, CROUP, ASTHMA, WHOOPING COUGH AND CONSUMPTION.

Among the numerous discoveries science has made in this generation to facilitate the business of life, increase its enjoyment, and even prolong the term of human existence, none can be named of more real value to mankind, than this contribution of chemistry to the healing art. A vast trial of its virtues throughout this broad country has proved beyond a doubt, that no medicine nor combination of medicines yet known, can so surely control and cure the numerous varieties of pulmonary disease which have hitherto swept from our midst thousands and thousands every year. Indeed, there is now abundant reason to believe a remedy has at length been found which can be relied on to cure the most dangerous affections of the lungs. Our space here will not permit us to publish any proportion of the cures effected by its use, but we would present the following opinions of eminent men, and refer further inquiry to the circular, which the agent below named will always be pleased to furnish free, wherein are full particulars, and indisputable proof of these facts.

From the President of *Ankerst College*, the celebrated Professor *Hitchcock*.—"James C. Ayer, Sir: I have used your Cherry Pectoral in my own case of deep-seated bronchitis, and am satisfied from its chemical constitution, that it is an admirable compound for the relief of laryngeal and bronchial difficulties. If my opinion as to its superior character be of any service, you are at liberty to use it as you think proper."

EDWARD HITCHCOCK, LL. D.

From the widely celebrated Professor *Stillman, M. D., LL. D.*, Professor of Chemistry, Mineralogy, &c., Yale College, Member of the Lit. Hist. Med. Phil. and Scientific Societies of America and Europe.—"I deem the Cherry Pectoral an admirable composition from some of the best articles in the Materia Medica, and a very effective remedy for the class of diseases it is intended to cure."

New Haven, *Ct.* Nov. 1st, 1849.

From one of the first Physicians in Maine.—"Dr. J. C. Ayer, Lowell. Dear Sir: I am now constantly using your Cherry Pectoral in my practice, and prefer it to any other medicine for pulmonary complaints. From observation of many severe cases, I am convinced it will cure coughs, colds, and diseases of the lungs, that have put to defiance all other remedies. I invariably recommend its use in cases of consumption, and consider it much the best remedy known for that disease."

Respectfully yours,

I. S. CUSHMAN, M. D.

Saco, Me., April 26th., 1849.

Prepared and sold by James C. Ayer, Practical Chemist, Lowell, Mass. Also by druggists everywhere. m3t

FRUIT TREES FOR SALE.—50,000 Peach Trees, all of the best market varieties, at the following prices:—By the single hundred \$5. One thousand, \$45. And ten thousands for \$400. Also, 40,000 Apple Trees of the best market varieties, and of large size. By the single hundred, \$12.50, or one thousand for \$110. Mats and packing, \$1 per hundred for Peach, and \$2 for Apple Trees. Catalogues will be forwarded to all applicants.

ISAAC PULLEN,

jan 4t Highstown, Mercer Co., New Jersey.

ENDLESS-CHAIN PUMPS, OR WATER
Elevators.—These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.
A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults of privies, where the contents are in a semi-fluid state.

A. B. ALLEN & Co., 180 and 191, Water st., N. Y.

DOMESTIC ANIMALS AT AUCTION.—The postponed yearly sale of full-bred shorthorns and improved dairy stock, consisting of about 50 head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved dairy stock, which is composed of the finest shorthorns, with a slight cross of Amsterdam Dutch, which, some writers say, was part of the original ingredient which composed the improved shorthorns.

I am now breeding the shorthorns, Devons, and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The cow which won the first prize as a milker, at the American Institute last year, was bred by me, and composed of the above-alluded-to dairy stock. Several of the bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All cows and heifers old enough, will be warranted in calf at the day of sale, by my imported bull "Lord Eryholme," or my celebrated bull "Lamartine."

I own two thorough-bred Devon bulls; one, the celebrated old Major; the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold, which, I have not as yet determined.

A full catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk sows, in pig to my imported boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 Southdown ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported buck "Babraham." Some of my buck lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain stock from my previous herd, but will also enable persons to procure calves from my imported bull, lambs from my imported ram, and pigs from my imported boar, all of which animals were recently selected by me in person, when in England.

The mode of warranting the cows and heifers in calf, is this: In case they prove not to be so, it shall be optional with the purchaser, on his certificate of that fact, either to receive from me \$25, or to send the cow to my farm, and I will keep her the proper time, (free of expense), to have her got in calf to either of my bulls, which he shall choose. I will give \$25 for any heifer calf from any of the cows or heifers sold at that sale, delivered on my farm, at two weeks old.

Stock purchased to be sent to a distance, will be delivered on shipboard or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the south, in a climate to which it would not be well that stock should be transported, at that hot season of the year, may let such animals as they may purchase, remain with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post, Office please pre-pay, and I will pre-pay their answers, and also a catalogue if required. Catalogues will be to be had at all the principal Agricultural Warehouses, and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time, will find my superintendent, Mr. Wilkinson, to give them the desired information when I am not at home.

Dated this 4th day of March, 1851, at Mount Fordham, Westchester county, eight miles from the city of New York, by Harlem Railroad.

L. G. MORRIS.

apr 3t

NEW-ORLEANS AGRICULTURAL Warehouse, comprising a large assortment of Plows, Harrows, Cultivators, Fanning Mills, Corn Shellers, Corn and Cob Crushers, Straw Cutters, Ox Shovels, Ox Yokes, Grain Threshers, Corn Mills, Axes, Hoes, Shovels, and other Agricultural Implements. Also, Gardening Tools, Guano, Plaster, Rock Salt, &c. &c. Orders will be executed for every article wanted by Planters.

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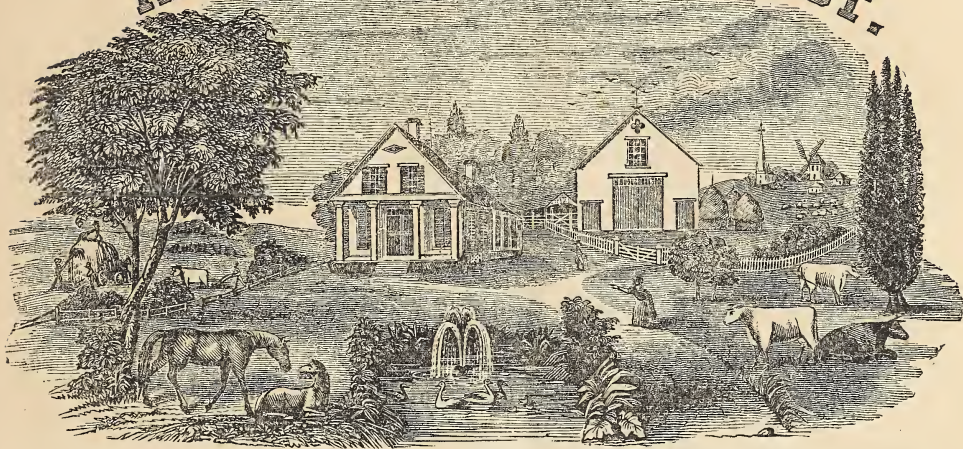
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AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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THE TEA PLANT—COMPARISON OF LABOR IN CHINA AND THE UNITED STATES, ETC.

From the Journal of Commerce, we extract the following interesting remarks from the pen of Dr. Smith, who is taking unusual pains to establish the cultivation of the tea plant in the United States:—

The labor of inland transportation of tea in China, a distance, upon an average, from the tea plantations to the shipping port of Canton of 800 to 1,000 miles, and a waste of six weeks to two months' time, costs 4 cents a pound, equal to 33 per cent. of the value of the tea at the place of its growth. This enormous expense of transportation only may startle some of our friends, when they couple such an expenditure with the boasted cheapness of labor in China. But when they consider that in China, there is an entire absence of railroad, steam navigation, and even of common roads; that whole cargoes of tea are constantly carried upon the backs of porters, an eighteen days' journey over a mountain pass, to Ho Keil and the rivers of Kyang, besides numerous other passes, he will perceive that cheap manual labor in that country is the most extravagant power for the transportation of goods.

I suppose that in no part of the United States, the cost of inland transportation from the place of growth to a shipping port would equal one quarter that sum, or occupy one tenth of the time. The wages of day labor are entirely nominal, unless we couple the amount of labor performed.

The dearness of Hindoo labor, compared with American, although nominally cheap enough to starve an ordinary man, is officially settled by Dr. Jameson, superintendent of the tea plantations of the East-India Company, Himmalaya Mountains, northwest provinces of India, in his report of 1847, to the governor. He remarks, "that at task work, three acres of tea land to dress, weed, and keep in order, is the allotment to one laborer. I should be glad to be informed how many acres an American farmer, having the land already planted and in order to his hand, and nothing else to do, would keep in good condition? In this part of the Union, embracing all the slave-holding states, one slave cultivates and keeps in order ten acres of cotton and ten acres of corn annually. A negro laborer, therefore, in the United States, performs more than six times the labor in the same time that a Hindoo does in India. That is undoubtedly about the difference of physical force. The payment, therefore, of 6 cents a day to a Hindoo laborer would be equivalent to the

payment of 36 cents to a field negro laborer in the United States. Cheap labor compels cheap living; a little boiled rice without animal food, just keeps the attenuated frame of the Hindoo in existence, but renders him incapable of severe trial. The negro is well and amply fed three times a-day upon the strongest food consumed by man—Indian-corn bread, hommony, and bacon. His muscular and hardy frame shows his force.

I have no desire to see people of this country live without labor, but I wish to see them live by their labor. In nothing are the blessings of the curse more manifest, than in the necessity entailed on man to labor for his bread. A state of moral degradation, inconceivably wretched, follows a condition of general indolence.

A few more particulars will show the favorable position in which the American agriculturist is placed, and I apprehend will be sufficient to confirm, in the judgment of a discreet observer, the truth and validity of the principle advocated. The nominal value of labor in Java, China, and India is perhaps sufficiently known to render a repetition here unnecessary; but the contingent expenses of freight, insurance, &c., are important items in the aggregate cost of labor, and claim some attention.

Freights of tea and other goods from China and India are \$24 a ton of 40 cubic feet to Europe; time occupied in a passage four to six months. Freights from the United States to Europe, \$6 a ton; time occupied in steam ships, fifteen days. Insurance, from China and India to Europe, 3 per cent. From the United States to Europe, by steamships, one half per cent. Mark the difference, and see how soon your cheap labor exceeds your dear. Inland and foreign transportation, with the consequent necessary expenses, constitute a part of the cost of labor, just as much as tilling the soil, in order to supply the market. Without further investigation, I am content to rest the claims of the American cultivator for success, upon the strength of this argument. The difference in the cost of the produce delivered in the market gives us the power of it, and all the wealth the East-India Company can pour out, in support of their enterprise, will avail nothing. Like the forced growth of cotton, the more they expend, the more they will lose.

I cannot close this communication without expressing my gratification in the removal of my tea plants, last week, from the village of Greenville to this plantation. I never before had an opportunity of examining the roots of the plants put out when I first came to Green-

vile. I saw last week every plant lifted, and examined the roots. They grew remarkably last summer, and are now fully rooted, with fine large main and collateral roots with an abundance of fibrous radicals. They all stood the snow, eight to nine inches deep upon a level, on the 3d of January, and the severe frosts of winter, without the slightest covering or protection, and without the loss of a single plant. They are now all forming part of the plantation, composed of those received from China last June, and a few planted the first week in June, which germinated the 17th of September. All these young plants were thinly covered with straw. Some of them have lost their foliage, others have not. The stems do not appear to have sustained any injury. The fresh buds are beginning to shoot. I cannot help thinking that we have now demonstrated the adaptation of the tea plant to the soil and climate of this country, and succeeded in the permanent establishment of the plant within our own borders.

JUNIOUS SMITH.

Greenville, S. C., March 12th, 1851.

GUANO—ITS GREAT MERITS AS A FERTILISER.

THE vast superiority of guano over all other manures is attributable to the fact, that it is wholly composed of animal remains, concentrated by the evaporation of most of its moisture, at the same time that no portion of its substance has escaped in consequence of those insidious changes, known as fermentation, decomposition, &c., by which new products are formed, and some of the most nutritive elements are evolved and pass off as gases. This condition, so different from what is observed elsewhere, over nearly the whole surface of the globe, is owing to the circumstance that these deposits are found in a dry, warm climate, where rains are almost wholly unknown. The moisture voided with the excrements of the birds is soon evaporated in the dry atmosphere, as well as that contained in the refuse fish, (which constitutes their exclusive food,) their broken or addled eggs, together with their feathers and carcasses, thus withdrawing from these substances one of the indispensable requisites of decomposition. There is a gradual change, however, going forward in these remains, by which the recent animal features are broken up, their form and texture slowly altered and reduced to a fine powder, and they at last, perhaps after ages of rest, have assumed that brownish hue, and homogeneous mass, known as Peruvian guano.

The simple statement of its origin and subsequent condition, clearly reveals the full merit of guano, unapproached and unapproachable in value by any other manure. The analyses of average specimens of Peruvian guano have been repeatedly made, and with nearly the same result. We subjoin one, as indicating, with little variation, the character of most of the guano imported for American consumption. This average was taken from numerous analyses made by Dr. Anderson, of Scotland. It gave of

Organised matter and ammonical salts,	53.16
Phosphates,	23.48
Alkaline salts,	7.97
Water,	13.73
Sand,	1.66
	<hr/> 100.00

The quantity of ammonia yielded by the above was 17 per cent. The proportion of phosphates is also very large, being nearly one fourth of the entire quantity, which is accounted for in the fact that these sea fowls subsist solely on marine fish, which yield large quantities of these valuable ingredients.

Von Martius estimates guano to be five times as valuable as night soil, and four times more so than pigeon dung; and Liebig considers the importation of *one cwt. of guano*, when properly applied as manure, as equivalent to the importation of *eight cwt. of wheat*.

The supereminent value of guano may be fairly claimed, because it embraces every element required by plants for their most rapid development and growth, with the exception, perhaps, of potash, except such as abound in every soil and atmosphere, and even potash it probably aids in liberating from the soil, where it has been securely locked up for ages. The silicates of soda, magnesia, and other salts, almost everywhere exist in sufficient quantity to furnish the necessary food for crops, while the organic elements, carbon, hydrogen, and oxygen, are profusely furnished by the dews and rains, and atmosphere. Nitrogen, the only organic element, so difficult of arrest and appropriation by plants, while floating through the air, is abundantly furnished by the various ammoniacal compounds of guano.

There is no doubt that much of the efficacy of guano is owing to the large proportion of phosphates it contains, which are so minutely divided as to yield all their vegetable food the instant it is demanded, to which demand the rootlets are strongly stimulated by the presence

of the ammoniacal salts with which the phosphates are intimately blended.

SOUTHERN CATTLE.

THERE are some individuals in this state who own as many as 6,000 head of cattle. They seldom feed anything but their oxen. About the 1st of March, the person owning the cattle gets all his cow drivers together, generally 30 or 40 in number, mounted on horses of his own raising. They then proceed to the prairie where the cattle range, and collect them together for miles around, into a herd; they then proceed to separate the cows and calves from the dry cattle. This, as you would most likely expect, occupies a whole day, with all the hands which can be obtained.

After getting the cows and calves by themselves, they are driven into a large pen, capable of holding several thousand. The calves are then kept up for a month or six weeks (their mothers being turned in with them every evening where they remain all night and are turned out again in the morning). In these large herds, the increase is generally 1,500 to 1,600 a year, and their owner sells 700 or 800 beeves annually, at from \$10 to \$15 per head.

I think this state will eventually be one of the greatest stock-raising countries in the world. It is everywhere well watered, and consists almost wholly of prairie land, which, in all seasons of the year, contains a sufficient quantity of grass to sustain any number of cattle; and moreover, the climate is so mild that there is not the least necessity for artificial shelter during the winter. In this country, we very seldom hear of cattle dying with the murrain, and similar diseases to which they are subject. Sometimes in the heat of summer, the fattest of the cattle die; but this is seldom the case unless they have been driven very hard.

Most of the cattle in this state are of the Spanish descent, and may be known by their long horns, fierce and savage looks, and their apparent dislike of mankind. It is almost impossible to tame a Spanish cow, so that she will come into the pen without trouble, or be milked without being tied; for this is the way in which most of our milch cows are tamed; but after a while, they get so that they will only stand when the rope is around their horns. But what is very singular, you seldom see a large stock raiser who has a sufficient quantity of milk and butter for his table. I am well acquainted with a man, who owns 3,000 head of cattle, and yet is obliged to buy all his butter.

The cattle are never salted, and never see a pen more than once or twice a-year. D* *
Houston, Texas, Jan., 1851.

CULTIVATION OF CORN.

I PLANTED one acre in corn; the ground was manured with 35 ox-cart loads of unfermented dung, which was evenly spread over the surface, and directly after spreading, it was turned under as deep as we could plow the ground, with a heavy, iron-beamed plow. The ground was subsequently well harrowed, and then marked out with a plow in rows, three feet apart. The seed was rolled in plaster, and planted in hills, varying from two to two and a half feet distance from each other, on the 14th day of May last. We planted 18 quarts of good seed, and the corn was not thinned out any, as the main object was to get a good growth of fodder; and as soon as the corn came up, it was plastered on the hill, and was afterwards ashed in like manner. It received two dressings with the hoe, and was cut up the 20th of September. It was husked in October following, and the product was 136 bushels of ears of sound corn, and two and one fourth tons of excellent and well-made fodder. The whole expense of raising and securing the crop, including seed, plaster, and ashes, I find amounts to \$11; we consider the crop richly worth \$40. I was disappointed in the result, as I expected more fodder and less corn.

S. R. GRAY.

Salem, N. Y.

We wish our correspondent had given the exact amount of plaster and ashes he used, and informed us as near as possible, the cubic yards or feet of his 30 loads of manure. The experiment would then have been more definite. However, as it is, we are much obliged by the article.

CULTIVATION OF THE RUTA BAGA.

ACCORDING to promise, I now send you an account of the ruta-baga crop I raised the past season, on two acres, six or seven rods of which were nearly destroyed for the want of an underdrain. The whole crop was 1,800 bushels. The acre which did not require underdraining, grew 1,015 bushels.

The field used to grow this crop, had been laid down to grass for the last ten years, and the crops taken off without the use of manure during that time. The soil is a dark-colored gravelly loam.

The manure used for the two acres was a compost of 10 loads common barnyard manure,

five loads of scrapings of the bottoms of charcoal pits, 30 bushels poudrette, five bushels of ashes, and four bushels of plaster, thoroughly mixed together. This compost remained seven days, and was then tossed over and left for eight days, at the end of which time, it was put upon the ground in a high state of fermentation. As a load was spread, the harrow was passed immediately over it, to prevent the escape of the gases. The seed was drilled in on the 25th of June—harvested in the month of October.

Expenses of plowing sod,	\$4.00
Harrowing and light plowing, without moving sod,	3.00
Harrowing in manure,	1.00
Spreading manure,	2.00
Two pounds of seed, at 75 cts. per pound,	1.50
Drilling in seed,	1.00
Horse and man with steel-toothed cultivator,	3.00
Thinning and hoeing seven days, at 75 cents a day,	5.25
Harvesting into cellar 14 days,	10.00
Interest on land, valued at \$100 per acre,	14.00

\$33.75

1,800 bushels, at 12½ cents, \$225.00

Net profit, \$191.25

I have taken the low rate of one shilling per bushel, as it appears like a large story at that; but, in truth, I am receiving for 500 bushels, 18 cents, and retailing as many as I can spare at 25 cents per bushel, which would very much enlarge the amount. VALENTINE H. HALLOCK.

Northeast Centre, Feb., 1851.

The above is the actual result of one of our best practical farmers, in old Dutchess county. We hope it will not frighten anybody from doing likewise, now that it is recorded in a book. Carrots are also much raised in this county. Will any of our good friends there give us an account similar to Mr. Hallock's of their experience in this crop?

CORN AND APPLES.

SOME years ago, my father was in Dutchess county, and saw some nice corn, and took with him to Long Island, a few ears to plant, but forgot it in the following spring, until two weeks after his other corn was planted. He then planted it, and had corn to boil two weeks earlier than from his first planting. The next year, it was but little earlier, and the third year he could perceive no difference.

This reminds me of the Baden corn, and our old friend, Thorburn's Chinese tree corn; and about which there were so many contradictory reports. According to the various statements, they were both very early, and very late, medium in ripening, and by some, highly extolled, and by others bitterly condemned.

Some attribute the late ripening of corn, mainly to the quality of food given it, without taking into view the difference of latitude where it grew, and where it was planted. Corn planted either north or south from where it grows, will ripen either earlier or later, as the case may be, which has led many into error, in regard to the quality of different varieties.

Apples.—A neighbor of mine, who has paid much attention to the culture of fruit, (in Westchester county, N. Y.,) recently informed me that his Vanderveer apples had, of late years, become so poor and worthless, that he thought of cutting down most of the trees. He had both young and old trees, growing in different soils and situations, and the produce was all alike. He also stated, that several years ago, his golden pippins were very poor and worthless, and greenings also; but both kinds are now doing better, and produce good fruit. The Newton pippins have produced very poorly, and the fruit has been quite indifferent for a number of years. I am not aware that his trees showed any marked difference in their appearance, at the different periods alluded to. It would be interesting to know whether these peculiarities have marked the above varieties in other sections of the country. W.

CALIFORNIA FARMING.

A CORRESPONDENT from San Francisco thus writes us: "Although everything of the grass kind gets parched here in the dry season, still it is a first-rate farming country. It is only *apparently dry*. Dig down three or four inches, and the ground is moist enough. We have only to plant in the proper season; the crops then get a good start, and however dry it may be after that, they grow well, owing to the retention of the moisture a little below the surface. Any quantity of the best and largest vegetables I ever saw are grown here. I weighed a flat turnip, last evening, and found it 3½ lbs.; a cabbage head 30 lbs.! Just think of that! Potatoes are proportionably large, dry and mealy. One of my friends planted 30 acres at Bodega, 60 miles up the coast; only plowed them once after they were up—did not hoe them at all, and yet he got at the rate of nearly

400 bushels per acre—say about 12,000 bushels from his 30 acres. These he sold at 10 to 11 cents per pound. Thus the crop produced him about \$60,000! Who would not like to farm it at this rate? But such high prices can be calculated on no longer; and so many are going to plant this spring, I have no doubt that potatoes, and everything else in the vegetable way, will be as cheap with us, the coming summer, as in New York.

Grain, flour, beef, pork, butter, and lard are very low here now, and selling at a great loss to the shippers.

Sheep have recently been introduced here in large numbers, and of course will soon be plenty. Of horses and cattle, we found thousands among the Spaniards, when we first came here; they have never been high priced. Wild oats abound, and with grass, make abundant food for stock. In fact, they need never be foddered in this climate. The grass is green and grows abundantly all winter. T. A. S.

—••—
PORK—BACON—HAM.—No. 2.

SEEING that the bony structure, gelatinous substances, and muscles are the parts of the animal which earliest arrive at their full development, it follows that, other things being equal, those breeds which arrive at their full growth in the shortest period will be the kinds naturally adapted to secrete a superabundance of fat amounting to disease, (but which is the farmer's profit,) in the shortest period from the time of birth, and consequently least expenditure of food, presuming animals of different breeds but of like age, eat like quantities. Carrying this comparison a step further, namely, that if two animals so treated and killed at the same age, (say at nine or ten months,) were to be found when dressed, to weigh alike; but the one animal, say an improved Essex, and the other an Old English pig, their marketable value would be very different, fully 20 per cent. The first would present a fine, thick coating of firm fat, embedded in the cellular tissue, the ham would present the epicurean quality of marbled flesh, with a due amount of external fat, and the omentum, (caul,) would yield a fine leaf of white lard; the roasting pieces, if cut out for that purpose, such as the muscles running from the neck down to the loin, and including the joints commonly called the spare rib and loin, will be found tender, juicy, and fat. Another great advantage of this breed is, that in proportion to its size, the weight of the fine joints and pieces, such as the ham, shoulder, and belly, where the

desirable intermixture of lean and fat, so much coveted by epicures, is to be found, is much greater, relatively to the whole carcass, than will be found in the larger breed.

On examining the carcass of the larger breed, the enveloping fat will be found of a light-grey color, soft and flabby; the muscles stringy, and when salted, will run up greatly, yielding at the same time a large quantity of brine; so much so, that when dry, the whole weight will be found to have diminished in a much greater proportion than the same weight of pork from the smaller breed. To say nothing of the greater weight of bone in the latter than in the former kind, in cooking, the meat from the first will be found scarcely to diminish in size, whilst the second will be seen to shrivel up considerably. This will be especially seen in the belly parts. The cause of this difference is, that in the matured animal, the cellular tissue, ligaments, &c., have fully developed themselves—have become firm and compact; whilst in the growing animal, these portions of the body remain in a softer and more gelatinous state, in consequence of the presence of moisture. It will be seen that this form of tissue is almost indispensable to the growing animal, in order to adapt it to its constantly-increasing expansion of frame. When arrived at its full growth, this softness gives place to firmness and compactness of texture. A less amount of water is now found in the tissues, and the flaccidity of youth is succeeded by the elasticity of adolescence—the compactness and strength of maturity being followed by the rigidity of age.

The effects arising from cooking and salting meat in the forms presupposed are in unison with the above facts. In meats, salted or cooked, derived from the immature animal, the gelatine is dissolved out of the tissue, and the animal fibre contracts, which, combined with the circumstances of the tissues bearing so much larger a ratio to the fatty and muscular parts, cause the meat to contract and shrivel up, whilst the disproportion of sinewy substance to the whole mass makes the meat hard and tough; at maturity, the tissues are capable, in boiling, of absorbing moisture and becoming softened. This kind of meat has consequently the tenderness so desirable. Although of two animals treated as described, the profit decidedly preponderates in favor of the smaller breed, it by no means follows if the experiment be carried further; that is, until the larger breed has arrived at maturity, that the profit would not be with the larger animal; as after the smaller breed has

arrived at a certain amount of obesity, it would merely become a consumer of food without any commensurate advantage. On the other hand, the larger animal would be constantly developing its frame; and when fully matured, I have my doubts whether any animal yields so large a return of meat for the quantity of food consumed as selected mature animals of the Old English breed. In this respect, the improved Berkshire bears an intermediate place between the smaller and the larger breed, arriving at maturity earlier; but I doubt, when fully grown, whether it puts on the same quantity of flesh for an equal amount of food, and in so short a space of time as the old large breed at maturity. Of the three breeds now named by way of illustration, my own experience leads me to decide that for all purposes, whether as fresh pork, pickled pork, ham, and bacon, the merits of the improved Essex exceeds all other kinds; that the improved Berkshire follows; whilst the old large kind is a mere bacon pig; as such, however, it is highly esteemed in the farm house; the huge fitch, with its great depth of fat, being considered the most economic food for the laborer—in which opinion he will be found to concur, as whenever he has a choice, or from circumstances is compelled to purchase for himself he will always be found to prefer the thick fat part of the fitch.—*Journal of the Royal Ag. Soc.*

ON THE ASSIMILATION OF NITROGEN FROM THE AIR BY PLANTS, AND ON THE INFLUENCE OF AMMONIA IN VEGETATION.

MANY years ago, M. de Saussure remarked that a solution of sulphate of alumina became, if exposed to the air for a sufficient length of time, converted into ammoniacal alum. This observation, made in the year 1804, demonstrated the existence of ammonia in the atmosphere. Since the time of M. de Saussure, many chemists have endeavored to ascertain the quantity of ammonia that exists in the air by more expeditious and more exact methods. The importance attributed by physiologists to ammoniacal compounds in the development of plants, was the cause of these endeavors made by the chemists. It is the general opinion that the source from which plants derive their nitrogen is ammonia existing either in the soil itself, or in the manure laid upon it, or in the atmosphere.

After having satisfied myself, by a long series of experiments made on much larger quantities of air than have been analysed by my predecessors, that the quantity of ammonia in

the atmosphere is scarcely appreciable, if pains be taken to avoid sources of error which may be caused by accidental emanations of the gas, I was led to doubt the reality of the influence attributed to ammonia in vegetation.

To clear up these doubts, I sowed a certain number of seeds in a mixture of equal quantities of white sand and brick dust, which had been previously calcined, for many days, in a porcelain furnace, in order that all organic matter in them might be utterly destroyed. This mixture was placed in a certain number of pots, and to it was added 5 per cent. of ashes obtained by the combustion of the plants with the seeds of which I was experimenting. The pots were placed under a bell glass, hermetically sealed. The air inside the glass was renewed every day by means of a very large aspirator (containing 631 litres at zero, under a pressure of 760). But as this quantity of air, though large, did not contain sufficient carbonic acid for the purposes of vegetation, 5 and afterwards 7 per cent. of this gas was added by means of an apparatus from which the gas escaped bubble by bubble, during the whole of the time occupied by the renewing of the air. The air which came out from the bell glass was conducted into an apparatus in which all the ammonia present in the air was separated from it.

Thus two experiments went on at the same time; in the first, I dosed the ammonia with a certain quantity of pure air; and in the second the ammonia with a nearly equal quantity of air, which had nourished the plants under the bell glass. By comparing the results of these two analyses, I was enabled to see whether the ammonia of the air had taken any part in the development of the plants. On the other hand, by previously analysing a certain number of seeds similar to those with which I was experimenting, I ascertained how much nitrogen was introduced under the bell glass in the seeds. When the experiment is finished, I shall be able to ascertain, by similar analyses, the quantity of nitrogen assimilated during the experiment; and from that again, whether this nitrogen was derived from the ammonia or the nitrogen of the air.

Although the plants have not yet been taken out of the apparatus, the question may be considered as determined. It is quite clear that a certain quantity of nitrogen has been assimilated by the plants, and this nitrogen was derived from that of the air; for the plants under the glass have become developed in a remark-

able degree, and the air on coming out of the bell glass contains just as much ammonia as it did on its entry. Moreover, had the ammonia of the air been wholly assimilated by the plants, this conclusion would not be invalidated, since the quantity of ammonia introduced by the air, during the four months the experiment has been going on, does not exceed 0.75 or 1.15 grains, a quantity too small to have had any considerable influence.

So that the consequence to be deduced from the mere inspection of the bell glass is, that the nitrogen of the air has been directly assimilated by the plants, and that the ammonia in the air has had no sensible influence. This being ascertained, I next proceeded to determine the influence that a given quantity of ammonia, added to the air, would in its turn, have on vegetation.

For this purpose, I got more of the seeds on which the first experiment was made, and put them in pots under a bell glass as before. The air inside the glass was renewed, and 5 and afterwards 7 per cent. of carbonic acid was added as before. In short, the only difference was, that in this new experiment, a certain quantity of ammonia was daily introduced under the bell glass.

From the very first day, the influence of the addition was manifested. The leaves of the plants became tinged with a fresher and brighter green; the stems rose higher, the branches more numerous, had more leaves; all the plants, however, were not affected to the same degree, the greatest change being observed in the cereals.

In pure air, the cereals were sickly, blanched, their stems laid down instead of growing upright; in air containing ammonia, they were strong, straight, and from their upright stems sprang numerous leaves. So that a second conclusion may be drawn from the mere inspection of the apparatus, namely, that ammonia is favorable to the development of plants, and more especially to that of cereals.—*By M. Ville, in Comptes Rendus. Trans. for Gard. Chron.*

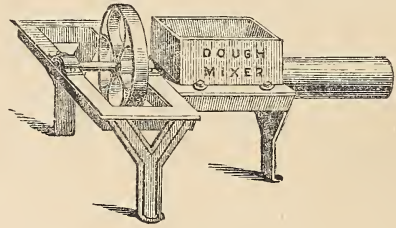
SWAMP DRAINING OF SOUTHERN LANDS.

WE have the following results of swamp draining, from one of the most enterprising and intelligent of our friends in South Carolina:—"My swamps work pretty well this winter. They made a crop last year which equalled my highest expectations. In this section, 500 pounds of seed cotton per acre is an excellent crop, and the average of the state about 400 pounds.

On my oldest 300 acres of swamp, I averaged 930 pounds, and on my best acre, which had in it 30 trees standing, 14 upturned roots, and numberless stumps, I made 2,746 pounds. This was not better land than a greater portion of the rest, but was *dried* earlier, being in the fork of two ditches. I think eventually, I shall average 2,000 pounds on all of it."

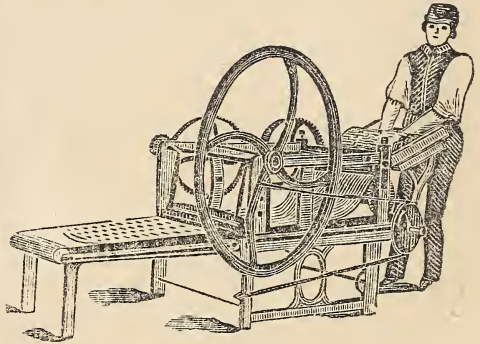
Mc CULLUM'S DOUGH MIXER AND BISCUIT MACHINE.

THE improved machinery for manufacturing biscuit, recently patented by Messrs. Mc Cullum, is becoming into general use, so much so that not a bakery in the country should be without it.



DOUGH MIXER.—FIG. 22.

The dough mixer is stated to be capable of working off 75 barrels of flour in a day; and the cutting machine, when employed by steam



CUTTING MACHINE.—FIG. 23.

power, will cut the dough into crackers, of 60 barrels, or by hand power, 40 barrels of flour in the same time.

EXPERIMENTS AMONG FARMERS.

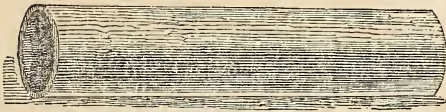
ONE of our most intelligent and largest Southern planters, thus puts forth battle against our worthy Reviewer: "He makes the very absurd points, that we must take such improvements as we can get, and not expect complete ones, as if incomplete ones were of any more value than a rotten egg." Not so fast, Dear Sir. In the absence of our very worthy captain, just now, we say for him, we accept the comparison of the egg, but not the *addling*, unless the experi

ment has been brooded over till all hope of vitality is fled. We admit the egg, but in the *process of incubation*. It may be only half hatched by some maternal biped; and it is the duty of those who are ambitious of seeing the future fledgelings, that they brood over and develope these incochate, undeveloped chicks.

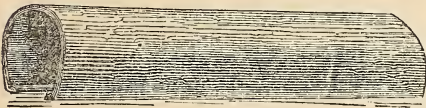
PRICES OF DRAINING TILE.

INQUIRY has often been made of us concerning the prices of draining tiles manufactured in this country. We are now happy to furnish that information, by referring our readers to the advertisement of Messrs. A. S. Babcock & Co., of Albany, on p. 167, of the present number. The classes of tiles which they furnish are represented in the adjoining cut.

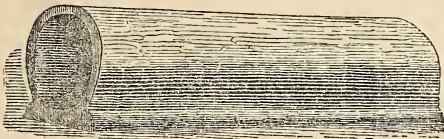
TUBULAR TILE.



HORSE SHOE TILE.



SOLE TILE.



DRAINING TILES.—24.

HINTS IN REGARD TO THE PRESERVATION OF PURITY OF BREEDS, AND THE IMPROVEMENT OF STOCK.

WHILE a lad, I resided in the same town with an old physician, who then gave the greater part of his attention to the rearing of mules for the West-India market; and there was a fact brought to the notice of all who observed closely, that seems to have a very important bearing upon the retention of purity of blood, and the improvement in the breeds of animals. *It was observed that after a mare had borne a mule, she never would bring forth a colt of any value, because it would possess so much the appearance of a mule as to render it unsaleable.* Suspecting this rule might apply as well to other animals, I observed that a spotted cow of the native breed produced her first calf, whose sire was a deep red, of a similar color to the male parent, and for five or six subsequent years, although she was

covered by a spotted, brindle and a dark-brown bull; yet her calves were all of a deep red.

I made many similar observations at the time, yet, as they were not placed upon record, I do not purpose to refer to them except as it relates to sheep. I lived in a wool-growing region, and we farmers' sons prided ourselves upon wearing home-spun "sheep's grey" for pantaloons; and to be able to keep in the fashion, it was necessary to have at least one black sheep in the flock. If one of the ewes brought us a black lamb for her firstling, we felt quite sure she would continue to do so the remainder of her life, and if we already possessed as many of those wearers of sable coats as we wished, the unfortunate amalgamationist was inevitably consigned to the tender mercies of the butcher.

Lest it may be thought that what I have considered as spots upon the sun, are only specks on my glasses, I will present the corroborating evidence of several English observers. Dr. Harvey, physician to the Aberdeen Royal Institute, says; "A young chestnut mare, seven eighths Arabian, belonging to the Earl of Morton, was covered in 1815, by a quagga, which is a species of wild ass, from Africa, and marked somewhat after the manner of a zebra. The mare was covered but once by the quagga, and after a pregnancy of eleven months and four days, gave birth to a hybrid which had distinct marks of the quagga in the shape of its head, black bars on the legs, shoulders, &c. In 1817, '18 and '21, the same mare, (which had in the mean time passed into the possession of Sir Gore Ouseley,) was covered by a very fine black Arabian horse, and produced, successively three foals that bore unequivocal marks of the quagga." Besides the instance already quoted, there is another similar case recorded: "A mare, belonging also to Sir Gore Ouseley, was covered by a zebra, and gave birth to a striped hybrid. The year following, she was covered by a thorough-bred horse, and the next succeeding year by another horse. Both the foals thus produced were striped; that is, partook of the characteristics of the zebra.

In both these instances, the mare had produced offspring from males of a different species from themselves. Walker, Baker, and Haller state that they have made similar observations to my own in regard to the ass and mare.

Mr. Mc Gillivray gives two instances of similar results where mares had only been covered by males of their own species, although of a different breed. In the royal stud, at Hampton

Court, several mares had bred from the horse Colonel, and the next year, although the foals had been got by the horse Actæon, in several of them there was observed unequivocal marks of the horse Colonel, which had been with the mares the previous year.

The Earl of Suffield had a colt got by the horse Laurel, that so closely resembled another horse Camel, that among the dealers it was boldly asserted that the colt must have been obtained from Camel until it was ascertained that the dam of the colt had previously borne a colt from Camel.

Singular facts are frequently observed among breeders of cattle; so many that Mr. Mc Gillivray, after narrating many says: "Among cattle and horses, they are of every-day occurrence."

The Rev. Charles McCombie, of Aberdeenshire, tells of a neighbor of his who had been twice married, and had issue by both husbands, five by the first and three by the second. Of the last three, one, a girl, bears great resemblance to the first husband, who differed very much in features, complexion, and general appearance from the second. Professor Simpson, of Edinburgh, tells of a Scottish woman who had borne a mulatto child from a negro man, and afterward a girl, whose father was white, had many of the characteristics of the negro race.

Physiologists, while they have admitted the phenomena, have been divided in their modes of explaining the laws that govern them, some supposing that an impression was made upon the imagination of the mother, producing a permanent result, while others deny the possibility of such a cause. The more probable reason to me is this: The offspring and the mother are so intimately connected by the funis, (navel string,) that the same blood circulates through the veins of each, and thus the progeny of the first impregnations produces a change in the whole organism of the mother, assimilating it in a degree to the male parent. If this be the true explanation, thus do husband and wife become, literally, "bone of one bone and flesh of one flesh," and in this manner, we can account for the failure of many persons in their endeavor to obtain animals of a perfectly pure breed. Let them look to it, that the female has not had her blood tainted by breeding with animals of a different class, previous to her being coupled with those whose peculiar characteristics they wish to perpetuate.

C. H. CLEAVELAND.

Waterbury, Vt., March 12th, 1851.

For more extended and curious information

on the subject of cross breeding, we would refer such of our readers as desire it, to a work recently written by Dr. Alexander Harvey, of the Aberdeen University, published by W. Blackwood & Sons, of Edinburgh.

GOOD AND BAD EFFECTS OF SALT ON ANIMALS

In several communications in the Agriculturist within the last few months, I observe there is a disposition to renounce the use of common salt as a condiment in the food or medicine of man and animals, and that it is no more necessary for cattle and sheep than it is for buffaloes, wild deer, and goats—an opinion at variance with numerous medical facts, and the experience of the whole civilised world from the earliest times. It is true, a few instances are cited in support of such a theory, as the semi-barbarous Aztecs of Mexico, the hunters of the Rocky Mountains, the wandering cattle of the prairies, and the wild beasts of the forest and of the plain. But when it is considered that these men and animals are inured to hardihood by fatigue or long exposure to the open air, confined to simple food, and possibly with means at hand to substitute something in the place of salt, such arguments appear to be futile, and would seem to be calculated to do more harm than good. On the contrary, when we contrast the lives and habits of civilised man, and of our domestic animals, confined as they are, a large portion of the year, in hot rooms or close stables, subsisting on a great variety of artificial food, which give rise to a corresponding derangement of their systems as well as to numerous diseases, medical and every-day experience show that salt is useful and even necessary to counteract the evils domestic or artificial life has brought upon them. Chemistry reveals to us the fact that small portions of common salt, applied to all kinds of animal or vegetable matter, hastens their decomposition, and hence, the utility of using this condiment in decomposing or digesting our food.

Salt, however, may be injudiciously administered in many cases, as will appear from the following remarks by Professor Robinson, in the Journal of the Royal Agricultural Society of England, vol. vii., part I., p. 190:—"I have for many years been perfectly convinced that salt allowed in quantity is highly prejudicial to all breeding animals, as it has a direct influence in greatly diminishing the necessary supply of milk for the immediate sustenance of the young animal; hence, salt is the best medicine to 'dry' a cow of her milk, and ewes would also be ben-

effited by free access to this substance for one week when their lambs are taken from them. I am also convinced that salt has the effect of diminishing the secretion of the liver, and that it is from this cause that the good effects of salt are so obvious in the feeding of animals. It is well known that incipient disease of the liver, is favorable to the production of fat. When lambing ewes are allowed a large quantity of turnips, with a small amount of other food through the winter, abortion is a frequent occurrence; their supply of milk is very deficient, and their lambs are dropped of various sizes and are far from healthy. If the ewes are allowed free access to salt, the lambs are still more unhealthy, and many die of indigestion and disease of the liver. The mortality of the lambs, in these cases, may, I think, be fairly attributed to the amount of salt taken by the dam; for, admitting that a small portion only is directly given them, the quantity positively taken in their food in turnips, is somewhat considerable. This is a point—the normal or natural quantity of salt contained in the different roots, &c., consumed by animals as food—which will throw much light upon this most important branch of agriculture.

“That the use of salt is highly beneficial to certain stock, and at certain times, there cannot be a doubt; but, from my own knowledge, it is no less equally true that the too free and indiscriminate use of it to all stock, and at all times, is highly prejudicial.”

MEDICUS.

THE TRAVELLER.—No. 5.

FROM Charleston to Savannah, some 160 miles, the passage is made by very comfortable steamers in about twelve hours. Savannah is one of the best-planned towns in the south. Its broad streets and shady squares are luxurious provisions for healthy enjoyment of city life. The position of the town is remarkable. It is upon a sandy bluff 40 feet high, and the only high point on the river in that vicinity. An immense tract of rice land is within sight; that upon the island directly in front of the city was bought up a few years ago by the corporation, to prevent the cultivation of rice so near the town on account of the supposed injury to the health of the citizens.

Savannah is a very wealthy and very enterprising place. The railroad to Macon, 190 miles, is one of the evidences of that fact; and although it passes through much comparatively poor land, its business adds greatly to the prosperity of the city. Mr. Cuyler, the president of

the company, is entitled to be respectfully mentioned, not only for his politeness to me, but for his excellent management of the business of the whole concern. This is a much more pleasant route to reach Macon than the one by Augusta and Atlanta. The population of Savannah is now about 17,000. Three excellent daily papers are published with a liberal support, which indicates the elevation of the people—success to them.

The day I left Savannah, January 3d, was a beautiful sunny day, contrasting strongly with the appearance of the first freight train we met coming down, covered with snow. This railroad grade is worthy of note. It rises very regularly about two feet to the mile, for 70 miles, when it passes a slight elevation and descent to the Ogeechee River, 101 miles from Savannah, and 200 feet above. Between there and the Oronoe there is a grade of 30 feet to the mile, which is the greatest on the road. The dépôt at Macon is 340 feet above the level of that at Savannah. The elevation of land above tide water determines the character of climate as much as latitude. The first hills on the route up, are seen near Macon, which is surrounded with those of moderate elevation, dotted with beautiful residences, surrounded by lovely gardens and other evidences of luxury and comfort.

Macon is a great cotton dépôt. Like nearly all Georgia towns, it is built upon very broad streets, which being sandy, are not muddy though unpaved. Much of the soil of the surrounding country has been wickedly destroyed by a system of cultivation prevalent all over the south, of plowing very shallow, up and down hill, which has had the effect to send the surface all down to the rivers to extend our territory a little further into the Atlantic Ocean. The waters of all the rivers of Georgia, once so pure and limpid, have never run clear since the country has been inhabited by the whites. Probably no soil in the world has ever produced more wealth in so short a time, nor been more rapidly wasted of its native fertility, than the central portion of this state. The cheapness of land and its great fertility has been its ruin.

On the night of January 7th, I left Macon in the mail stage, for Tallahassee, 220 miles; fare \$22; time, 60 hours; roads to be imagined; taverns unimaginable; coaches, horses, and drivers to match; and taken all together, not to be matched anywhere else upon this earth! yet, this road passes through some of the richest counties of land in the state. Many of the

planters of Houston and Baker, make 1,000 to 1,200 pounds of seed cotton to the acre, or five to eight barrels of corn; cultivating about 20 acres to the hand, 15 in cotton, and five in corn, besides potatoes and oats, both of which grow remarkably well. Much of the land is a rich loam containing abundance of lime, and generally level.

It was my intention to stop at Albany a few days, and if any of my friends in that county regret that I did not, they may be assured it was not from any want of disposition; but because the "hotel" of that fine-growing town is such an abominable nuisance, that I did not feel as though I could endure it until I made the acquaintance of some kind friend, whom I doubt not would readily take pity upon a traveller unfortunately located in such an uncomfortable place, as soon as informed of his deplorable condition. Although much in need of rest, I felt compelled to proceed. One meal was all I could endure. Thus much by way of explanation. This part of the state is very new, having been mostly settled since the Creek war of 1836. Steamers run upon Flint River, in high water and carry out the cotton to Apalachicola. The greatest objection to the country is limestone water and muddy soil. There are yet vast tracts of land in forest in this part of the state, though much of it is of secondary quality.

As we approach Florida, the surface becomes undulating, and around Tallahassee, it is really hilly, and elevated several hundred feet above the level of the ocean. Much of the land in Middle Florida is of a dark-red color, composed of sand, clay, lime, and iron, and having an unctuous feel as though it contained fatty matter. It is the finest red land in America, and as well worthy the attention of immigrants as any region of country I know of, taking into account its fertility, cheapness, and warm climate; and for one so far south, undoubtedly very healthy. It is a soil easily washed away when only plowed about an inch and a half deep; but as it is in places 20 or 30 feet to the bottom, it will be more than the present generation of land destroyers can do to utterly ruin the whole country. Besides, by a good system of sidehill ditching, such as has been adopted by colonel Williams, with level cultivation, the fertility of the land may be maintained forever. Even deep plowing, that is, plowing with two light mules only, and subsoiling with a common bull-tongue plow, with one mule, as lately practised by Major Ward, so mellows the land

and gives such an opportunity for the water to soak into it, that the washing is nearly all prevented. By a good system of cultivation, the land never can be worn out, and in time, would become one of the garden spots of the earth. It is anything but that now. The average quantity of land tilled to the hand, is twelve acres of cotton and eight acres of corn, besides oats, rye, and potatoes. The average yield is probably something over 600 pounds of seed cotton to the acre, or about six bales to the hand, as it does not turn out quite one third the weight in clean cotton. The average yield of corn is not over fifteen bushels, some say not over ten, to the acre. Corn is liable to a disease here, called "Frenching," that is new to me. It is only affected in small sections of a field; when about half grown, it withers and turns white, and never comes to maturity. The cause is unknown. Most planters make sufficient corn for food and feed, but do not make pork for the people. That comes from New York or New Orleans. Cattle and sheep are plenty, and just as mean as could be desired. They are worthless to a cotton planter, causing him to build a great deal of fence and affording no profit. There is a great deal of land besides the red land, not generally esteemed; yet, some of it that seems to be composed of sand produces wonderfully. The natural growth of timber on the sandy land is mostly long-leaved pine. On the red lands and creek bottoms, white oak, red oak, live oak, water oak, magnolia, beech, maple, ash, sassafras, dogwood, cherry, sweet gum, long and short-leaved pine, and some other kinds, perhaps. The country, like all other limestone countries, is not well watered. There are but few mill sites, and stock water in many places is scarce. One singular feature of the country is, full-sized rivers rise suddenly out of some cavern of the earth, and lakes and streams in other places send their waters down into the earth. Wells are frequently hard to obtain, and yet people will not learn that cisterns are better and cheaper, particularly in the red land, which is of such a firm nature that no brick work is needed; the hydraulic cement may be plastered right upon the earth.

Middle Florida, particularly in the vicinity of Tallahassee, was settled by a high-bred class of inhabitants, which makes society there very agreeable, and, notwithstanding they are real land destroyers, they are money makers. Nearly all the land is plowed with very small one-horse plows, either home-made or from the manufactory of A. B. Allen & Co., New York.

The majority of mules are the very meanest to be found in the United States. The advantages offered to any farmer desirous of locating a cotton plantation are probably greater than in any other state east of the Mississippi. Improved lands can be bought from \$5 to \$10 an acre—less than the present value of a single crop. In fact, the greatest misfortune to the country is, that lands are too cheap—men will waste them when of so little value. This is the true cause of so much waste and worn-out land throughout all the cotton states. It is more profitable to destroy than to save. I have something further to say of Florida in my next.

SOLON ROBINSON.

We wish to add a word to the above on the subject of plows and plowing. It is not our fault that small, cheap plows are taken in preference to those of a larger size. We have shown the advantages to the south of deep plowing over and over again in the *Agriculturist*; and every summer, when the planters do us the favor of making their annual calls at our establishment, we verbally bring the subject up before them. Frank and intelligent gentlemen as they are, they at once acknowledge the truth of what we say; but then, they add, "it is not quite time yet for us to change our system; deep plowing, we reckon, will come by and by;" and down goes the order again for small plows, and off their rich soil continues to travel into deep gullies and rivers! Time, however, will ultimately work a change for the better, yet not much of one, we fear, in our generation. Our successors will probably reap the harvest from the seed we are now sowing.

FATTENING CATTLE.

I AM now experimenting with a pair of large oxen in the way of fattening in the stable. It has been about two months since they were tied in their stalls, and have not been out since. Water is always before them, and they are eating about 18 quarts, each, of corn meal and oats ground together. They are growing finely. But some of my old experienced neighbors say they will sicken; some say they will not fatten much, while others add that they look well, but would do better if I would let them out. I ask, have you ever tried the experiment? No. Why do you think so then? "O, 'taint natur." Well, "natur don't make coal stoves, nor build warm houses for you, nor clothe you with wool and fur and leather; yet, you look about as well as you would if you took your winter meals in the

door yard, and slept on a snow drift. "Well, if the oxen was mine I'd let 'em out, they would be more healthy." "Yes, but a perfectly healthy animal is never excessively fat as I wish these to be." "Well, do as you like." I have not found a man who approves of the plan nor has tried the experiment.

W. W. B.

Fishkill, Jan. 29th, 1851.

Notwithstanding the amusing colloquy given above, between our correspondent and his neighbors, and the inference he seems disposed to draw in favor of his own practice, we must confess, that, according to the best experience they are right; and it is better that all animals should have moderate exercise when fattening. Perhaps they may not make so many pounds of flesh per day, as if confined, but this flesh is enough better to pay for it. Take the flesh of the deer, the elk, or other wild animals; of the turkey, goose, duck, pheasant, grouse, partridge, &c., and how much superior it is when killed in good condition, and at the proper season, to that of the best fed domestic animals. This is unquestionably owing in a great measure to the exercise they get, and the pure air they breathe. However clean stables and yards may be kept, still the air in and around them is not so pure as in the forest or green field.

Box or stall feeding, as it is called in England, has recently been much practised there; still the judgement of the best graziers and feeders is decidedly against the system. To be sure, they get more weight of fat and flesh, and make more manure for the food consumed; but they say, after a given time, the animals do not thrive so well, that they often get sick, and that the butchers will not give so much for the meat; it is flabby and tasteless, compared with the beef of those animals which have plenty of good air, exercise, and fresh water.

FOWL BREEDING.

I AM not so absorbed in fowl breeding as to have it the one idea of my life, but having taken the "fever" the natural way, in my childhood, I have cherished it for twenty years, with an occasional "cross;" so that at the present time, I scarcely fail to read all communications on this subject which I find in the different agricultural publications that come into my hands.

I have just finished reading the one over the signature of T. B. Miner, in the March number of the *Agriculturist*, in which he seems very positive that the average number of eggs obtained by one hen cannot be over 80 per annum,

and as a perfect settler in the matter, concludes that it would be infringing upon the laws of the Creator. Will the gentlemen in his No. 5 please to tell us why one class of hens has to lay 100 eggs per annum, while another only lays 60, to produce the maximum average number? Suppose one should keep only the class of fowls that produce 100 eggs per annum, would it interfere with the arrangements of the Creator, in this class? Now the object I had in view, in taking my pen, was not that of a reviewer, but to say that my experience is more favorable as to numbers than Mr. Miner's. I kept 16 hens and four cocks, last year, only four of which showed any desire to sit, through the entire season. Of the twelve that laid regularly, the average number of eggs was about as follows, some of them of course better than others:—

February,	12
March,	22
April,	23
May,	24
June,	20
	<hr/> 101

Thus the average number of eggs in five months, was 101; some of the hens, however, extended to from five to eight eggs in July. After moulting, several of them laid from 10 to 20 eggs each, before winter. I never attempt to force them in cold weather, but give them a good warm yard, partly under cover to bask in, and a warm light building for a roost. I feed with a good variety of green food, such as apples, turnips, cabbages, and the like, with meat and waste bread from the kitchen; with an occasional hot pudding for their special benefit, with corn and oats, and fresh water always at hand. They range over six or eight acres, if they choose, in good weather. I have several times had pullets begin to lay as early as November, and lay about every other day through the winter, with the exception of the very coldest weather.

Now for the breed—simply the Poland and the common dunghill, that have been kept together for six or eight years, with an occasional introduction of a fine new cock from either variety; so that they are very thoroughly crossed. The pullets will weigh from four to six pounds, alive; not large of course, as the black Polands are light. I have hens three years old that have never shown any disposition to sit. Will Mr. Miner tell what variety he “cultivates?”

West Meriden, Conn., March, 1851. R. LINSLEY.

IMPROVED BREEDS OF CATTLE.

You say we have frequent discussions on this subject, and nowhere in greater abundance than in New England; and you might have confined your remarks to my own state, Massachusetts (see page 44, this volume). And why should we not contend for the excellent qualities of the Oaks cow and the Nourse cow, as well as that of many others? Perhaps some light on this subject may do you a little good. I once asked some of my neighbors to join in making up a club to take your paper, and to a man, they simultaneously replied, “What can a man in the city of New York know about farming, and especially about farming in New England? Besides, they have so much to say about shorthorns; we have seen some of this breed of cattle on their way to the Brighton Market, and they were as big as elephants, and so fat that they could scarcely stand up in the cars; yes, and some of them were as white as the milk they gave. Bah! Who would eat such beef? We would as soon eat a roasted coon.” I, however, continued my subscription to your paper, and have done so from the commencement of it.

What I am about to tell you now, I ought to have told you a long time ago, and thus you would have saved all the ink you have shed from time to time in scolding New England for not improving our breeds of cattle. The way we used to do sixty years ago, (for that was the time I first began to act for myself,) out of half a dozen cows, for this was about an average number kept by forehanded farmers, there would be one, perhaps, superior; that is, would give, soon after calving, in good pasture, 12 or 15 quarts of milk a day. The heifer calves of this cow would be kept to give one to Dolly, another to Molly, a third to Huldah, a fourth to Sally, and so on, to each of the girls, one at their marriage; for no young man was afraid to marry in those days on account of not being able to support a family. These were bred on again, and their progeny handed down to the next generation; and were held on to by the good wife with as much pertinacity as Naboth held on upon his vineyard, for they never would consent to sell them. When twelve years old, I led one of these favorite two-year-old heifers 33 miles to the residence of a newly-married sister, taking two days to conduct her through, and one day to return. What say you to this? In this way, it would be very strange if some what we call good milkers should not be found. But the science of breeding, then, as now, was not cared for nor understood; the best calves

were generally allowed to be selected by the butcher and killed; the next best, raised for steers or cows; and if there was a *runt*, unfit for an ox, he might be kept for the stock bull. No one ever thought of raising a bull because he came from milking stock.

My old uncle kept a stock of 100 head, more or less, of horned cattle, and his ambition was to breed working oxen, and train them for use in this branch of husbandry. He became somewhat noted, because he would occasionally import a bull from England. If he made a cross of a Devon bull upon a Hereford cow, he was made the butt of the two towns where his property lay, his house standing in one, and his barns in the other; they taxed his person in each, the assessors where his barns stood, contending that he lived more in his barns than in his house.

I will only add in conclusion, that what New England was 70 years ago, on the subject of stock breeding, we are still the same, with a very few exceptions. OCTOGENARO.

SHORTHORN CATTLE—THE IMPORTED BULL EXETER.

THERE has been no time for many years that our farmers and cattle breeders have appeared so alive to their real interests in producing good stock as at present; and from appearances, well bred cattle are likely to pay fair prices to those who have them to spare.

We have had some solicitude to learn how the different animals composing the fine herd of shorthorns which we sold for Mr. Sheafe, last August, have progressed with their new owners; in most instances, we learn they have done remarkably well. Mr. Vail, the well-known shorthorn breeder, of Troy, purchased five cows and heifers, and among them were some of the highest priced animals. Two of these he sold at a considerable advance soon after he purchased them; the two others, one of which has now a remarkably fine bull calf by Exeter, are reserved for his great sale in June.

That extraordinary fine, *imported* bull, of the Princess tribe, Exeter, was purchased by our brother, Lewis F. Allen, and went to Black Rock. Of him he recently writes, "You inquire about Exeter. I am gratified to say, that he fully equals my anticipations; and they, after knowing the high quality of the stock from which he is descended, and the wide reputation of his breeder in England—which were fully warranted by the appearance of the bull himself at Mr. Sheafe's farm—were not low. Exeter is truly

a very superior bull. His points are most of them, perfect, his handling quality cannot be excelled, and I have rarely seen an animal his equal in that particular. He keeps, too, as easy as a Southdown sheep, now at two and a half years old, and in rapid growth, actually requiring less food than some of my grade yearlings. You know that I obtained Exeter not only to improve the quality of my general herd, but principally to cross upon the heifers, I have got by Mr. Vail's bulls, two of which, (one of them, his imported Wellington,) I have had on my farm for three years; and from them I got much capital stock. I have now several cows in calf to Exeter, and intend, the coming season, to put every shorthorn and grade cow on the farm in calf to him, as he cannot but improve everything he touches. I now have about fifty cows, all thorough breds and high grades, and hardly an indifferent milker among them. Rely upon it, if you want *deep* and *sure* milkers, you must adopt the shorthorns."

By the above letter, we also learn that Mr. Allen will probably offer a large portion of his valuable herd of cattle for sale early next fall, having now upwards of one hundred head. If so, we shall try to persuade him to bring them to the neighborhood of New York for that purpose; as nowhere are good blood, and milking stock more needed than here, and our farmers and gentlemen of the country are better able to appreciate and purchase them than formerly.

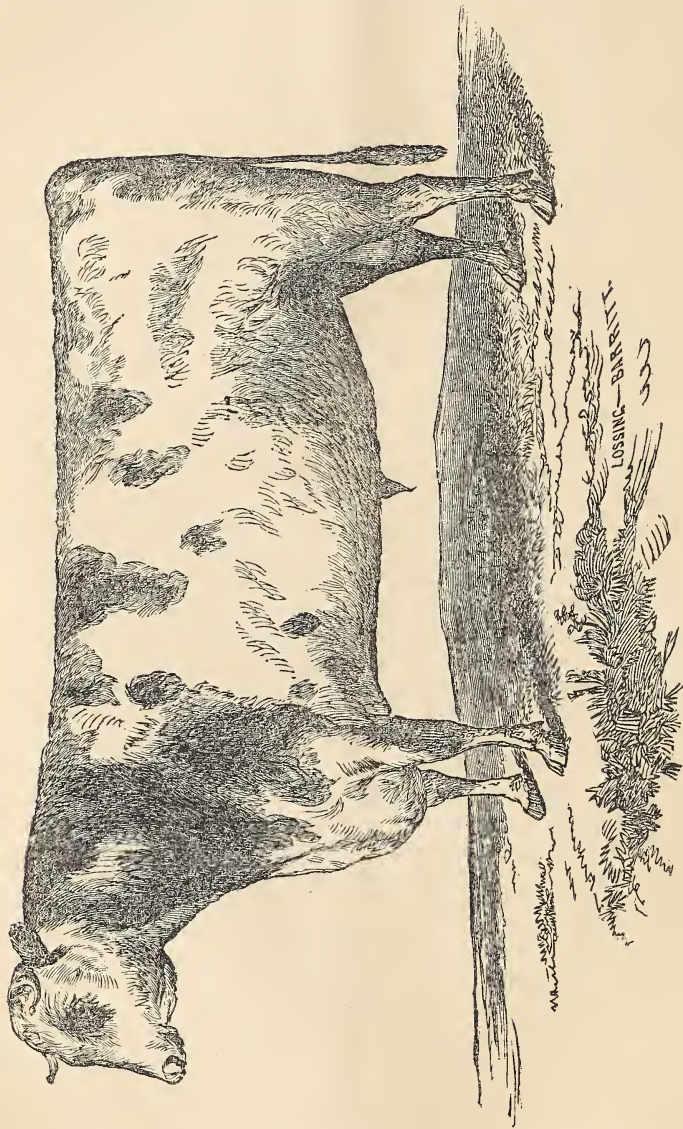
HOW TO MAKE A HAPPY HOME.—Always be cheerful. A dwelling furnished with cheerfulness and cheap furniture will always afford more happiness to the inmates, than cushioned sofas and carpeted floors, elegant mirrors and mahogany sideboards, with sour looks and ill temper. Though the elegancies of a well-furnished house are not to be despised, they are not alone sufficient to produce happiness. Farmers, teach your children cheerfulness, and you will make them happy. Do not wholly restrain the girls from frolicsome mirth, or such enjoyments of long evenings as will add roses to their cheeks and vigor to their constitutions. Nature will then tempt them, as spring opens, to cultivate and beautify the garden, and make home happy.

WHAT SEED WILL YOU PLANT?—Acorns will produce oaks, and dollars produce fortunes; but if you wish to enjoy the fruits of virtue and happiness, you must plant the seeds of love, and cultivate goodness to all men.

SHORTHORN BULL SPLENDOR.

THE shorthorn bull, Splendor, (calved Sept. 1837, bred by Mr. Thos. Weddle, dam Beauty, sire Charles C. H. B. (1,816), both imported by Mr. Weddle,) is an animal of great constitution, and many good points. The cut below is a fair outline, but of course cannot show his

Splendor has, without doubt, served more common cows than any other bull in the state. He invariably stamps upon his get his many good qualities (often superior in general appearance). His steers are good workers, and his cows choice milkers, both in quantity and quality. He has been kept most of his life in



SHORTHORN BULL SPLENDOR.—FIG. 25.

great width of hind quarter. His coat and handling is first rate, having that soft, velvety feel, which is so desirable in all shorthorns. He is of a remarkably mild and gentle temper, yet, still retains all the fire and vigor of youth, and weighs, in very moderate condition, 2,200 pounds.

Livingston County, N. Y. The reader is respectfully referred to any drover or stock raiser from that section of the state for further particulars in regard to his qualities, and the superiority of his progeny. JOHN R. PAGE.

Sennett, Cayuga Co., N. Y.

PLOWS AND PLOWING.

WITHIN the past ten years more has been done in the United States for the improvement of plows and plowing, than had been accomplished since the settlement of the country. Up to the year 1850, there were probably at least, 200 different patterns of plows manufactured in this country, all of which have proved more or less useful for the particular purposes for which they were designed. A gradual change, however, has latterly been taking place in plowing among our most enlightened and enterprising farmers; they have found it highly advantageous to deepen gradually the tilth of their soil. For this purpose, they not only require the frequent use of the subsoil plow, but a surface-soil plow, also, which can turn up and thoroughly pulverise the earth deeper than any now in use. Two kinds of plows different from any

"About a year ago, I called upon Messrs. Ruggles, Nourse, Mason & Co., and upon stating the difficulties I had experienced with my plows, they remarked that there was quite a growing demand for plows for deep work; and they at once evinced a most commendable readiness to undertake such a series of experiments, regardless of expense, as should enable them to supply, in the best manner, this demand of an advancing agriculture. They made a plow that gave me satisfaction, for it could turn a furrow a foot deep, and it did not choke under the beam. The making and trial of this plow suggested further improvements, and these in turn led to others. The various experimental trials may be summarily stated as follows:—

1. To make a plow to turn furrows ten to twelve inches deep, and turn them without choking under the beam.

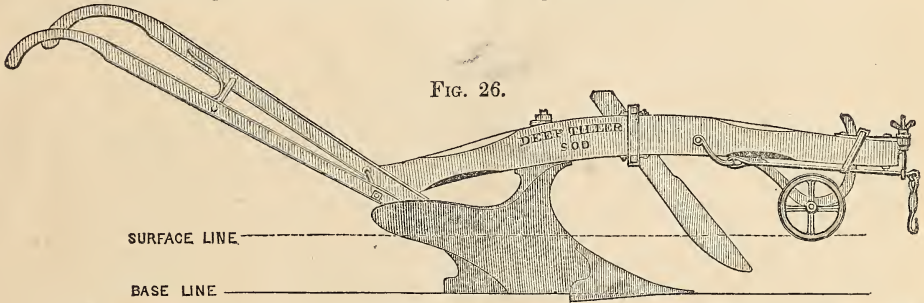


FIG. 26.

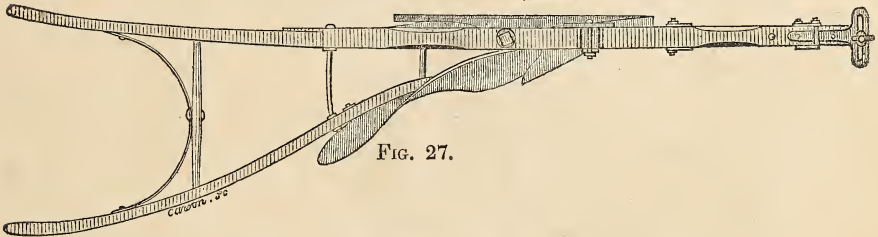


FIG. 27.

RUGGLES & Co.'s FURROW PLOW. No. 72—FURROWS 7 BY 11 AND 12 IN.

yet manufactured, have been earnestly called for by the public for this purpose; one for turning a deep, flat furrow in a light soil, and another for turning a deep furrow in a stiff clay soil, at an angle of about 45°. To effect these purposes with any degree of perfection, the share, mould board, and wings of each required plow must differ materially from the other in width, rise, and turn. This great desideratum seems now to have been accomplished, as our readers will learn, by the following extracts which we make from an able article in the March number of that excellent periodical, the Albany Cultivator, written by Mr. F. Holbrook, an eminent practical and scientific farmer of Brattleborough, Vermont:—

2. To make a plow to turn deep furrows, requiring the least practicable width in proportion to the depth of furrow.

3. To make a plow to turn deep narrow furrows, and to turn them on so easy a line of transit as to prevent breaks on the furrow slice.

5. To make a plow to turn deep, narrow furrows on the easiest practicable twist, and to lighten the draught of the plow whenever it could be done without detriment to the best work.

5. To make a series of sizes of plows for turning flat furrows, seven, nine, and twelve inches deep, each plow proportionately combining the above specifications.

The experimental trials also led to the pro-

duction of two sizes of plows for adhesive soils, laying lapped furrows at an angle of 45° ; and two sizes of plows for turning stubble furrows.

Fig. 26, represents a furrow-side elevation of plow No. 72, or smallest size of the new flat-furrow plows, and fig. 27, a horizontal plan of the same. In considering the remarks I offered upon No. 72 plow, it will be borne in mind that plow No. 73, for furrows nine inches deep, and plow No. 74, for furrows twelve inches deep, each possess the same general form and working properties of No. 72. They are each constructed upon the principles of an ingenious scale, the lines of which, as applied to the mould boards of three plows, and relatively the same.

Fig. 26, represents the handles as long and raking, which gives the plowman a powerful leverage, and an easy and accurate control of the implement; the beam is high, and arches well over the coulter, to permit loose grass or other loose matters to pass off, and the plow to swim clear; the coulter is consequently long, and is made wholly of steel, to give it the requisite stiffness; the wheel or roller is nine inches in diameter, to prevent laboring and creaking on the axis, and it is set under the beam, experiments the past summer indicating that a wheel on the side of the beam gives the plow an unsteady movement; a wrench accompanies the plow, adapted to the adjustment of the coulter, roller, clevis, &c.; the draft rod is short, connecting with the beam forward of the coulter, in order to preserve the space under the beam in that region entire; the quadrant, or clevis, attached to the end of the beam, through the bolt of which the draft rod passes, is adapted to give the plow any desired *landing* or *earthing*. The mould board is long, the line of transit over it for the furrow slice is easy, giving the slice a long, easy, and equal curvature throughout.

Fig. 27, shows the inclination of the land side, and the coulter has a corresponding inclination. Fig. 27 also shows the position of the beam over the body of the plow. The share and lower parts of the mould board are narrow, and the mould board is high, to adapt the plow to deep, narrow work. The share is long, with a raking cut, which gives it an easy entrance into the ground.

Fig. 28, represents pretty well the movement of a furrow slice seven inches deep and eleven inches wide, over the mould board of this plow, and its final position after leaving the plow. The

easy transit and the equal flexure of the slice, are noticeable. By means of the inclined land side and coulter, the slice is cut off the land upon a bevel, which very much facilitates its dropping in snugly beside the previously-turned slice. It will be observed that the width of cut made by the share is such as to leave a good hinge uncut, upon which the furrow holds its proper position at the bottom, while the top is describing a quarter of a circle to reach the perpendicular position, at which position the plow has ripped off the hinge. If the slice were cut entirely off by the share, it would be apt to push off at the bottom so far as to fail of being turned over to its proper position; in other

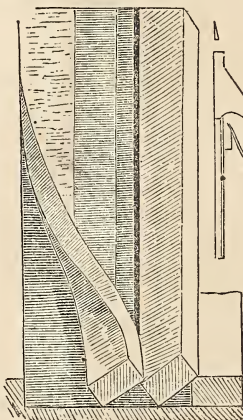


FIG. 30.

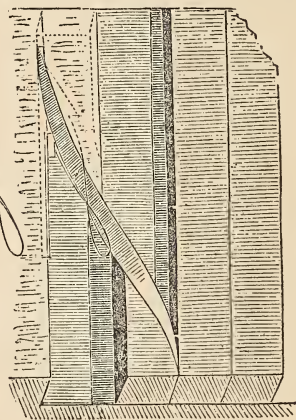


FIG. 28.

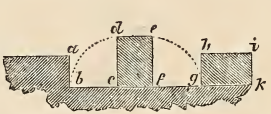


FIG. 29.

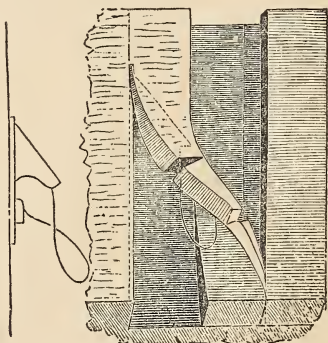


FIG. 31.

words, a wider furrow would need be taken to turn well.

Fig. 29 shows that, theoretically, a furrow cut straight from the land will shut in beside the previously-turned furrow. The furrow slice, *c, d, e, f*, is cut straight down at *a, b*, and rising on the corner *c*, as a pivot, it describes a quarter circle, *b, d*, and then changing to *f*, as a pivot, it describes another quarter circle, *e, g*, and shuts

in snugly beside the previous furrow, *g, h, i, k*. But in practice, it is difficult to make the furrows do so; they are very apt to ride on the corners, as represented by Fig. 30. With an inclined land side, and a bevel cut from the land, this practical difficulty is avoided.

find in practice that such plows can only be kept erect in furrows seven inches deep, by constant, laborious exertion on the part of the plowman; that they have a constant tendency to ride the furrow at the point where the mould board wings over so much; that the heel of the

FIG. 32.

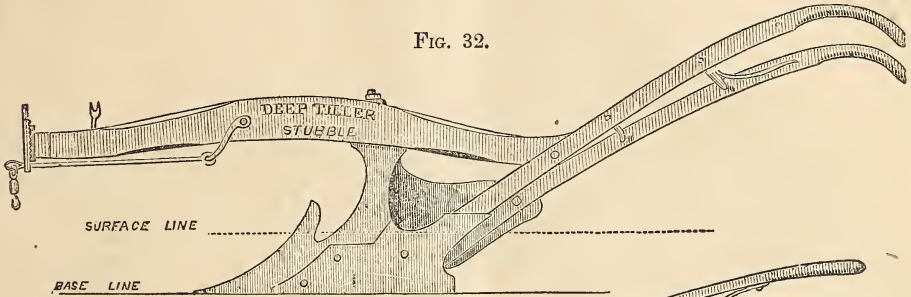
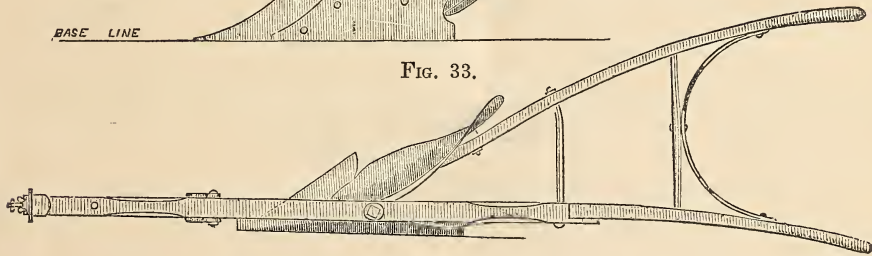


FIG. 33.



RUGGLES, NOURSE, MASON & Co.'s STUBBLE PLOW, No. 37.

Fig. 31 represents the movement of the furrow slice over an imperfect mould board. It will be observed that the plow is too wide on the bottom to take a narrow furrow, and if the attempt is made to turn a eleven-inch furrow,

land side sole is lifted an inch or two from its proper level position in the furrow channel, and that the plow inclines very much to run on the point of the share.

Fig. 32 represents a land side elevation, and fig. 33, a plan of stubble plow, No. 37. There is a larger size, No. 38, adapted to deeper work than the plow here represented. The surface line, fig. 32, shows the position of this plow in a seven-inch furrow. The handles are of good length, though shorter than those of the No. 72 plow; the beam is high and arching; it is mounted with a short draft rod and a dial clevis, adapted to give the plow a wide range, both *landing* and *earthing*. The perpendicular height from the base line to the under side of the beam, immediately forward of the standard, is 17 inches, which enables the plow to make

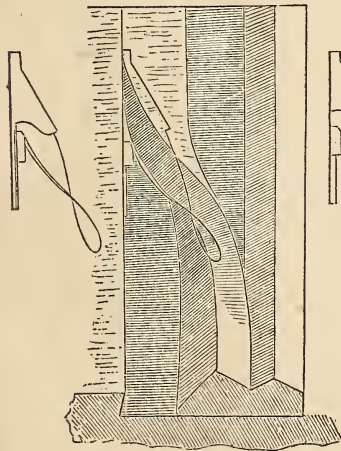


FIG. 35.

there is no hinge left for it to turn on. The mould board is so short, and wings over so excessively, that the furrow slice is cramped into an unnatural movement, and is badly broken. The plow is also too low every way for a seven-inch furrow, and is completely buried. We

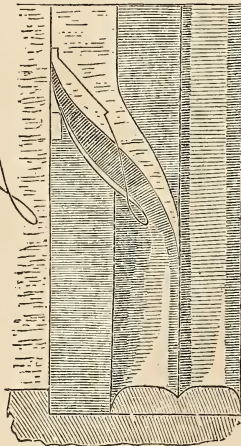


FIG. 34.

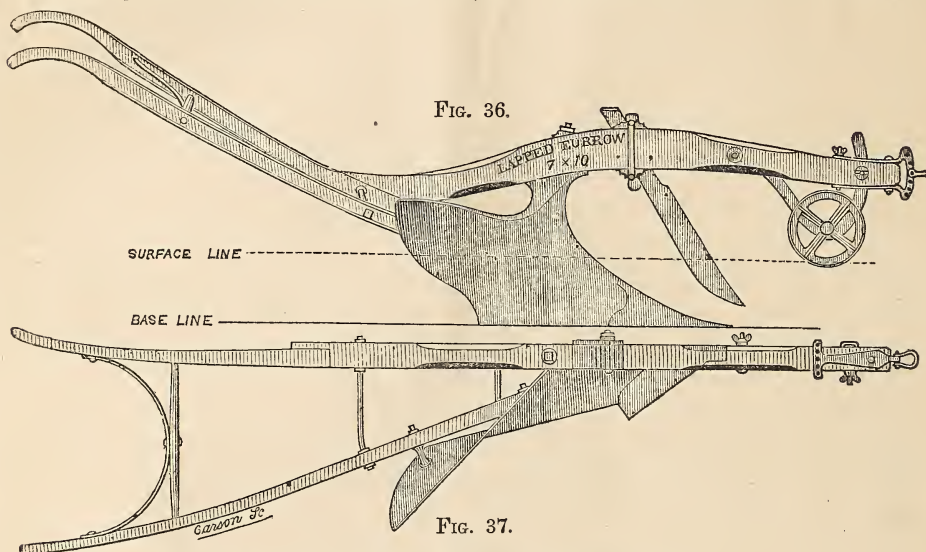
its way among rank stubble, corn stalks, &c., without choking. The fin cutter is an excellent point in this plow. By making an easy, clean cut from the land, the furrow is not encumbered with clods of earth rolling down from the land side, as they are apt to do where the furrow is

torn from the land by the breast of the plow. The fin cutter also lightens the draught of the plow. Fig. 33 shows the form of the mould board, the position of the beam over it, and the position of the land side.

Fig. 34 is a pretty good representation of the work of this plow in stubble or old land. It is

compare with that done by the stubble plow No. 37. The stubble plow No. 37. would not make nice work in sward furrows; it would break them too much.

Fig. 36 represents an elevation, and fig. 37 a plan of the new sward plow for moist adhesive soils. There is another size, for furrows nine



PLOW FOR LAPPED FURROWS—FURROWS 7 BY 11.

noticeable that the furrows are nicely laid for the reception of the seed grain; that the furrow slice is all taken up and forced over to an inverted position and there it stays; and that the furrow channel is entirely cleaned out for the reception of the next furrow. It is impossible, however, to represent these practical matters exactly on paper; we can only represent them generally.

Fig. 35 represents the work of an approved sward plow, in stubble furrows. It is not broad and full enough at the heel to clean out the furrow channel. Then, too, after the furrow slice has reached the perpendicular position, there is not force enough in the mould board to compel the slice to grow over to its proper place, and as there is not cohesion enough in the slice to hold it together, a portion rolls one way, and a portion the other. The centre of the furrow on top is therefore the highest, the furrow channel is half filled up, and the work generally will not

inches deep, of the same general form and proportions with the one here represented. The handles, fig. 36, are long and raking, the beam is high, giving a space of 17 inches forward of

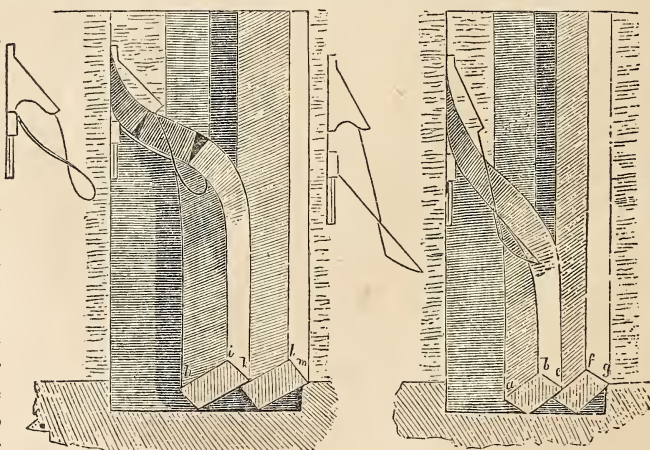


FIG. 39.

FIG. 38.

the coulter, and the plow is mounted with a Scotch clevis, the adjustment for *earthing* being represented in fig. 36, and that of *landing* in fig. 37. The general outline of the mould board is very well represented in fig. 37. The share is

narrow, the wedge power great, and the back part of the mould board is adapted to place the furrow slice exactly at an angle of 45° before leaving it. The land side is perpendicular, and the coulter stands in a range with it.

In considering the form and proportions of a plow best adapted to the working of stiff heavy soils, Messrs. R., N., M. & Co. have thought that plow the best that will cut a perfectly rectangular furrow, whose depth is to its width as two is to three, and lay it at an angle of 45° . The plows for stiff lands, that they now offer the public, are adapted to work as above specified. They combine the best working properties of the celebrated Scotch plow invented by Small, with the lightness and cheapness of the American plow. The lines of the scale from which these mould boards are fashioned, give them a slight convexity of surface, which is considered an advantage in the working of tenacious, unyielding soils; but the lines may be varied to straight lines for medium soils, or to concave lines for light, sandy soils. The line of transit for the upper edge of the furrow slice, is adapted to the delivery of the slice with an unbroken crest. The mould board presents a uniform resistance to the furrow slice, and will brighten uniformly over the entire surface, however tenacious the soil may be.

Fig. 38 represents the action of this plow in furrows seven inches deep by ten inches wide. The plow enters the ground very easily, a good hinge is preserved upon which to raise the furrow slice to its perpendicular position, the back part of the mould board lays the slice at an angle of 45° before leaving it, and the two exposed faces of the slice are of equal breadth, namely, seven inches.

Fig. 39 represents the action of a plow unadapted to laying proper lapped furrows. The plow is so wide upon the bottom as to require a width of furrow slice of at least twelve inches, and yet it cannot go more than seven inches deep—indeed, it can hardly do that, without crowding over to the left, or land badly, and it cramps and breaks the slice very much. But the slices are of unequal proportions. The width is too much for the depth, and, consequently, so flat a surface is formed, that if the furrows are to lie exposed for some time to the weather, and if the soil be a stiff adhesive clay, it will run together and bake so much as to render the harrow quite inoperative, and but a shallow seed bed will be raised. The spaces underneath the furrows are wide and low, and they will be apt to fill with soil, which will

prevent a proper circulation of air, and a free passage of superfluous moisture, and the surface will be apt to be wet and heavy.

The triangles, *abc*, *efg*, fig. 38, are of equal sides, and the angles, *b*, *f*, are angles of 45° . The triangles, *hik*, *klm*, fig. 39, are of unequal sides, and the angles, *i*, *k*, are angles of only 36° . If we suppose a series of sections of these 7 by 10 and 7 by 12 furrow slices, each extended to ten rods, for instance, in width, and that they are one inch thick, we shall find upon a calculation of the aggregate exposed surface of each, that the furrow sections, 7 by 10, of equal faces, have exposed 2,791 inches of surface to the air, while the sections 7 by 12 of unequal faces, have exposed but 2,722 inches; and any one who chooses to extend the calculation and comparison to an acre of ground, will find the balance to be very much in favor of the slices represented in fig. 38. A like comparison of rectangular furrow slices, whose depth is to their width as two is to three, and which are laid at an inclination of 45° , with furrow slices of any other form, or proportions, that are practicable to be laid, will be found to result in favor of those first named; indeed, it can be shown that no furrow slices but rectangular ones, whose depth is equal to two thirds their width, can be laid at an inclination of 45° ; and since it can be proved that rectangular furrow slices, whose depth is equal to two thirds their width, and which are laid at 45° , present the greatest surface to the ameliorating action of the atmosphere; and since it can also be proved that such furrow slices present in their projecting angles the greatest cubical contents of soil for the harrow to operate on, in raising a fine, deep tilth, or seed bed, and that such furrow slices have the best spaces for the circulation of air, and the passage of water, underneath them, we may conclude that all plows, for laying lapped furrows in heavy adhesive soils, are absolutely faulty in just so far as they fail to cut rectangular furrows, whose depth is to their width as two is to three, and to lay them at an inclination of 45° . I would give unerring mathematical demonstration of these points, were it not that I should be extending an article already too long."

F. HOLBROOK,

Brattleborough, Jan. 10th, 1851.

QUALITIES OF AMERICAN PRODUCE.—South Carolina and Georgia produce the best cotton, (Sea-Island,) and the best rice in the world.

There are no other apples equal to those of America.

REVIEW OF THE MARCH NUMBER OF THE AGRICULTURIST.

THE first article in this number is a continuation of foreign notes upon

American Agriculture.—Crude and somewhat untrue as these notes are, I hope they will do some good. Farmers in this country need a little stirring up so as to make them sensible of their faults. Men cannot be expected to cure themselves of habits of slovenly farming, before they are made sensible that their system needs improvement.

Poultry Raising.—This writer, and some of your other correspondents are determined to make your readers understand that there is some humbug in this branch of the business, at any rate. I think Mr. Miner is decidedly in error in regard to hens ceasing from laying in warm climates during the winter months. At least, Old Jo says he is, and negro authority about poultry will go further with me than any amount of white folks' say-so. There is no mistake though about the truth of the last paragraph of Mr. Miner's article.

What Can I Do?—A very pointed question, admirably answered. I recommend that every town in the whole farming country of America, should do just as the people of Norfolk county have done, if they desire to succeed in an agricultural society. That is, get men, women, and children all deeply interested in the subject. That little article contains facts worth a fortune. Let every reader put the question to himself, and then read it over again and find an answer to the inquiry of what he or she can do, and they will soon see how much good one individual can do to a large community.

Imports and Exports.—Expenditures exceeding income, that is all. And the end is not yet.

Cranberries.—After reading this statement about the profitable appropriation of worthless swamps, can any one tell me why it is that more of them are not put under the same system of cultivation?

Village Lectures.—These should never be passed lightly over. Encourage your children to read them. They contain a deal of valuable information.

Embellishments of Railroad Embankments is a subject worthy the notice of everybody. At present, they are the most unsightly objects in this country. Let the press begin to press the matter into the public noddle.

A Jaunt in Ohio.—"I was disappointed in my first impression of Cincinnati," says the writer. So was I more than a quarter of a century ago,

when I saw what a quantity of excellent land lay between the town and those hills, upon which tract then lying waste, the city has spread its giant limbs, and is already climbing the steep hills beyond. The growth of American cities comes nearer realising some of the creations of fancy in Arabian tales, than they do the realisations of sober calculation. The fact is, all calculation is at fault. Where the most calculating people on earth have calculated to make a city grow, the forest is still growing, while other places, upon which no calculation was made, have disappointed the shrewdest calculators.

Georgia Burr Millstones.—How little is known of the riches that lie buried in the soil of this country. I hope to see these articles generally introduced, if they are what the writer assures us of their character, because they are American, and will tend to promote home industry.

Mulching Orchards.—I advise everybody, who owns a fruit tree, or ever expects to be worth land enough to plant one upon, carefully to read this article. They will learn a secret about the cultivation of trees worth a hundred times more than the cost of this paper for a year. No doubt by mulching, fruit trees could be grown at the south in situations where they now fail entirely. It would be worth while to try the effect of the system upon orange trees. Who knows but the blight and death of this valuable tree might not be prevented by covering the whole ground with pine straw or other substances that would make a covering impervious to the sun's rays?

Orcharding.—Directions for raising fruit trees from cuttings, or seeds either, and on budding or grafting, with about one half the American farmers, is labor lost. However good the directions are, they will not be followed. It would have been one of the most interesting pieces of information obtainable by the census takers, to know what portion of the cultivators of the soil, cultivate fruit enough for their own use. I answer not one half, and half of that half grow only the kind known as *five to the pint*. Talk to such folks about planting a nursery! Why, they would never nurse a plant if they had one, except nursing their wrath against some neighbor, who objected to raising fruit only to feed those who are too careless or indolent to raise their own. Talk to such folks about pruning their young trees. Pshaw! The only pruning they ever give them is to let in a few hungry cattle in the winter; for all they can get off the apple trees will save fodder. Talk to them

about pruning! Did not their fathers know how to prune? Can you learn them anything about the business to which they were raised? These same people will contend with you that a tree will grow as many bushels of little apples as it will big ones, and that a bushel of apples is a bushel of apples, any way you can fix it, and therefore, what's the use trying to raise them great overgrown things? Be assured my worthy friend, we have got a good deal of pruning to do before we shall get this crab-apple breed of bipeds to plant or prune good fruit trees, and plenty of them.

Ivy on Buildings.—A new idea, but a very rational one, that such a coating of foliage should protect instead of injure a building. But could not grape vines be trained upon buildings, and while protecting them from the weather, give the inmates abundance of fruit?

Connecticut Farming.—Glad to hear one of my fellow citizens commending a paper that some others have found fault with, for showing up some of the dark spots of farming in the land of steady habits, where so many steadily pursue the same old track, their steady fathers did before them.

Preparation of Bones for Manure.—Whenever you can get the steam up in the minds of people high enough to make them think of the value of the bones they now throw away, you may perhaps get them to think a little further about the mode of preparing them for manure.

To the one in ten thousand who have already begun to think of the enormous waste of one of the best fertilisers in the world, this article will be of great value, because steaming bones is a process that any farmer can carry on to good advantage, at little cost—grinding them can only be done in large establishments. But the first process toward preparing bones for manure, is like the direction of Mrs. Glass to cook a fish—first catch it. So of bones—first save them.

Madder will never be raised to any considerable extent in this country while the people continue madder than monkeys, to leave their homes in pursuit of some *ignis-fatuus* fortune in California or some other land of folly. They never will plant a crop that requires three years to mature, lest they might sell out and be off before harvest time.

What Mind Will Do in Agriculture.—Well, you have told what one mind has done. How many of Mr. Delafield's neighbors have done likewise? That is, put into exercise for the benefit of their fellow creatures any of the faculties of mind with which nature has endowed them.

Protection of Sheep against Dogs.—Mr. Speaker! I move to amend that petition. Is it not written that "every dog shall have his day?"—evidently a misprint, and therefore let day be stricken out, and sheep substituted. Then every dog will have his sheep, and that will be the end of them. The writer says truly, that two species of animals cannot exist in the same neighborhood, and as I say, too, we cannot get rid of the dogs, let us give up the sheep, and save ourselves all further trouble and vexation about the matter. As for mutton, everybody knows, who has ever dined, as I have, with the great Chang Fou Chong, in China, that no dish ever equalled that of a roasted puppy stuffed with onions—for those that like it! It is sheer nonsense to keep sheep for the wool, since we have so many woolly heads we might shear. Whoever in this dogmatical age of the world undertakes to save his wool by crying down the dogs, is barking up the wrong tree. The people won't have it so. Not that they love their mutton less, but that they love their puppies more than they do the public welfare.

Horse Shoeing.—There is more good sense in this little paragraph than half the horse shoers in this country ever thought of. I commend it to their attention.

Ladies' Department.—The selections for this page are uncommonly good this month. Ladies, turn back and read again the articles on Rye Flour, Dress of English Women, Brown Bread vs. White, and Habits of Jenny Lind. What an admirable woman this is. The first of singers, generously beneficent, kind and good, strictly neat and temperate in all things, and takes plenty of exercise in the open air! I wish the women of America could be persuaded to imitate her habits, as detailed in your little paragraph. My daughters have done so for years. Our women seem to be afraid of exercise, especially in the open air. Want of this, with thin dress, light shoes, and tight lacing, is the great cause of their degeneracy. They are fast becoming mere parlor furniture; and gaudy, poor, and very fragile even at that.

REVIEWER.

CUCUMBERS may be grown to advantage in small piles, say two or three bushels of well-rotted manure laid upon grass land. Keep the grass short, and pluck out such weeds as may start, and water if needed, which is all the cultivation required.

THE MOST EFFECTUAL WAY TO PRESERVE APPLES.—Lock them up in a dry cellar and hide the key.

NOTES FROM A KITCHEN GARDENER'S MEMORANDUM BOOK.—No. 4.

Tomatoes.—Though not tenacious of any particular variety of soil, I am nevertheless of opinion that tomatoes thrive best on that which is light and dry. They should always be placed in an open exposure, where they will receive the full benefit of the sun; and it should be the aim of the cultivator to bring this wholesome and popular fruit to maturity during hot weather, as it must be obvious to all, that the early produce is less acid, and much richer in flavor than that which comes in later. With the view of obtaining choice fruit, it should be grown on a trellis, which can be simply formed by staking each plant, and attaching small cords for the support of the larger branches. When cultivated in this way, the produce may perhaps not be so great, but the fruit will be superior in point of size, and by being kept from the ground will not be so liable to decay. The size of the fruit may still be increased by cutting off the tops of the vines when in blossom, which also has the tendency to forward it. This season, I purpose growing them on a low arbor, and for effect, plant the "large red" and "yellow" together. Of the six varieties I cultivated last year, I prefer the "smooth red." The "large yellow" is perhaps more delicate, but not so rich in flavor. The smaller varieties are valuable for those who are fond of them, when preserved, and as they can be raised almost anywhere, they are worthy of cultivation if only for ornament. The plants should not be put out previous to the 1st of June, or at least until the ground is warm and the weather settled, as the occurrence of cold, wet weather retards their growth, and not unfrequently, they are destroyed by light frosts in the month of May.

During summer, the vines are liable to be infested with a large green worm, which feeds voraciously on the leaves, and if not quickly removed, will destroy the plant.

Egg Plant.—With young gardeners, there is a prevailing opinion that the cultivation of this plant is attended with much difficulty; consequently it is not attempted. Being very sensitive to cold, and requiring a long season to mature in, it is necessary, in order to have it fruit in season, to forward the plants in a hot bed, during which period of their growth, they require close attention. Their subsequent treatment, however, is simple, merely requiring to be kept free from weeds, and the ground loose around them, occasionally drawing a little of the earth up to their stems. Those who have not the convenience for raising their own plants can always, at the

proper season for putting them out, procure them from the gardeners. For a moderate-sized family, six plants will be sufficient, which, if put out in good ground, in an open exposure, about the 1st of June, with ordinary attention, will produce abundantly. The "oval purple" is the earliest variety cultivated for table use, but not so rich in flavor as the "large globular." The white variety, though eatable, is grown chiefly for ornament, and for this purpose, is highly deserving of cultivation. It fruits earlier than the earliest of the purple varieties, and is more prolific, producing smaller fruit, which, from its color, as well as form, the propriety of its name, is fully realised. At advanced maturity, the color changes to yellow, and the fruit continues on the plants a long time without decay.

Okra.—In the southern states, this plant is extensively cultivated for the value of its capsules, which, when green, are highly prized in the preparation of soups. With us, though esteemed by many, it is not generally cultivated. Being sensitive to cold, the seed should not be sown too early. About the middle of May, sow in drills; then transplant to the distance of nine inches, in good ground, and they will grow to the height of seven to ten feet, and under some circumstances even higher, producing a handsome formed leaf and beautiful blossom. I would recommend that a small portion of the ground appropriated for tall, growing plants be assigned it.

Onions.—Requiring only a few for table use, I prefer planting early in the spring, small top onions, or sets, which should be placed at least six inches apart in rows one foot wide, in rich, strong ground, in an open exposure, and during their growth, kept thoroughly free from weeds. Being more delicate both in appearance and flavor, I select the "white silver-skinned" variety, which, by many, is considered objectionable in consequence, as stated, of not keeping sound through winter, which inconvenience I have never been subjected to.

Peppers.—If it is an object to have this stimulating fruit early, the plants should be forwarded in a hot bed, and not put out until determined warm weather. They are considered valuable for pickling, and the conspicuous fruit, forming a beautiful contrast with the leaves, is worthy of cultivation. Of the several varieties I cultivated last year, I prefer the "sweet mountain." The "Cayenne" is an interesting variety, both for its beauty and domestic uses, and for some purposes is most valuable.

Ladies' Department.

ENGLISH WOMEN.

WE do not know how we can render our fair countrywomen a greater service, than by copying for their serious perusal and thought, the following admirable description of English women, from the March number of the *Horticulturist*, by Mr. A. J. Downing. We can corroborate from personal knowledge, all Mr. D. here says of their *greater breadth* of education, and superior conversation—we mean more particularly among the middle and higher classes.

We well recollect, when in England, passing a day at the country residence of a distinguished officer in the horse guards. There were sons and daughters of noblemen present as guests. The ladies, in very common calico dresses and thick shoes, walked over the park and farm in the morning, criticising the stock, the crops, the scenery, trees, shrubbery, and flowers, while the gentlemen were out shooting in stout fustian clothes, and thick, solid, hob-nailed shoes, such as our most ordinary farmers would hardly deign to wear. But at dinner, which took place at 6 P. M., all were elegantly dressed; the conversation throughout the evening, was easy and unaffected, but more intellectual, and embracing a much wider range, than that which pervades in any, except the very best and most highly-educated American society.

"The young English woman is less conspicuously accomplished than our young women of the same position in America. There is, perhaps, a little less of the *je ne sais quoi*, [I don't know what,] that nameless grace which captivates at first sight, than with us, but a better and more solid education, more disciplined minds, and above all, more common sense. In the whole art of conversation, including all the topics of the day, with so much of politics as makes a woman really a companion for an intelligent man in his serious thoughts, in history, language, and practical knowledge of the duties of social and domestic life, the English women have, I imagine, few superiors. But what, perhaps, would strike one of our young women most, in English society, would be the thorough cultivation and refinement that exists here, along with the absence of all false delicacy.

"The fondness of English women, (even in the highest rank,) for out-of-door life, horses, dogs, fine cattle, animals of all kinds—for their grounds, and in short, everything that belongs to their homes, their real, unaffected knowledge of, and pleasure in, these things, and the unreserved way in which they talk about them, would

startle some of my young friends at home, who are educated in the fashionable boarding school of Madam —, to consider all such things 'vulgar,' and 'unlady-like.' I accompanied the younger members of the family here this morning, in an exploration of the mysteries of the place. No sooner did we make our appearance out of doors, than we were saluted by dogs of all degrees, and each had the honor of an interview and personal reception, which seemed to be productive of pleasure on both sides. Then some of the horses were brought out of the stable, and a parley took place between them and their fair mistresses; some favorite cows were to be petted and looked after, and their good points were descanted on with knowledge and discrimination; and there was the *basse cour*, [poultry yard, we suppose Mr. D. here means, the word having several different significations,] with its various population, all discussed and shown with such lively unaffected interest, that I soon saw my fair companions were 'born to love pigs and chickens.'

"I have said nothing about the garden, because you know that it is especially the lady's province here. An English woman, with no taste for gardening, would be as great a marvel as an angel without wings. And now, were these fresh-looking girls, who have so thoroughly entered into these rustic enjoyments, mere country lasses and dairy maids? By no means. They will converse with you in three or four languages; are thoroughly well grounded in modern literature; sketch from nature with the ease of professional artists, and will sit down to the piano forte and give you an old ballad, or the finest German or Italian music, as your taste may dictate. And yet many of my young countrywomen of their age, whose education—wholly intended for the drawing room—is far below what I have described, would have half fainted with terror, and half blushed with false delicacy, twenty times in the course of the morning, with the discussions of the farm yard, meadow, and stables, which properly belong to a wholesome country life, and are not in the slightest degree at variance with real delicacy and refinement. I very well know that there are many sensibly educated young women at home, who have the same breadth of cultivation, and the same variety of resources, that make the English women such truly agreeable companions; but alas, I also know that there are many whose beau ideal is bounded by a circle that contains the latest fashionable dance for the feet, the latest fashionable novel for the head, and the latest fashionable fancy work for the fingers."

Foreign Agricultural News.

By the steamer *America*, we are in receipt of our foreign journals to the 5th of April.

MARKETS.—Cotton has fallen $\frac{1}{4}$ d. per lb. Grain, flour, and provisions, firm, at a shade of better prices.

Salting Asparagus.—Give as much as 20 lbs. to a square rod. Apply it after the plants have begun to grow in the spring.—*Gardeners' Chronicle*.

Influence of Light on Vegetation.—Oxygen is disengaged rapidly in solar light, insensibly in diffused light, and not at all in darkness. In the latter case, no carbonic acid gas, whatever, is given off by plants; the contrary is generally supposed to take place.—*Comptes Rendus*.

Influence of Gypsum on Vegetation.—M. C. Mène, from numerous facts deduced from experiments, came to the following conclusion:—1st. That gypsum has by itself no fertilising power, and is alone useless as a manure; 2d. That gypsum is only useful in agriculture when mixed with substances containing ammonia; in which case there is a double decomposition, and the ammonia is stored up for the use of the plants; 3d. That for gypsum may be substituted any other salt which will fix ammonia, and render it not volatile at the ordinary temperature.—*Ibid*.

To Keep Birds from Picking Fruit.—As the season is coming on for the depredations of birds, I beg to report my experience of last year, when I saved my currants and gooseberries, by winding colored worsted round and across my bushes; and my cherries, by hanging up several pieces of tin with strong thread in the different trees, two pieces being hung near enough together to clash with the wind, which sound, with the bright reflection of the tin in the sun, certainly frightened them away; and I had my due share of fruit, which, the preceding year, I was obliged to relinquish to them.—*Agricultural Gazette*.

The Use of Salt for Domestic Animals.—At a late meeting of the Royal Agricultural Society of England, in a discussion on the use of salt in agriculture, Mr. Fisher Hobbs remarked that, while he preferred the fishy refuse for application to land, he used rock salt for all the live stock on his farm, excepting pigs, for which he employed common household salt, boiled up with meal and potatoes for their food. For his horses, cattle, and sheep, he invariably used rock salt with success; the two former had always free access to it in their mangers, and the sheep in their troughs. In wet weather, the sheep would take a larger quantity of it than in dry weather. In a flock of 200, one half of which had access to salt, while the other half were debarred from it, the losses among those which had no salt were found to be from 3 to 5 per cent. greater than among those which had salt, when feeding on green crops, or food of too succulent a nature. Professor Simonds said that he could bear testimony to the legitimate use of salt, and agreed with Mr. Hobbs that sheep fed on too luxuriant grasses, without being at the

same time supplied with salt, did badly. The salt corrected the injurious effect of the food, and promoted the secretion of bile. Salt marshes, he believed, never rotted sheep; while wet pastures, and their coarse food invariably were found to do so. In the Royal Veterinary College, the horses were constantly allowed to have a lump of salt by them; and when he was himself in country practice, he had salt sprinkled over the hay in the ricks, and found it very valuable for horses, sheep, and cows. He thought it a very important question for the consideration of the council.

Flax Cotton.—In the late proceedings of the council of the Royal Agricultural Society of England, we perceive that they have turned their attention to the extension of flax culture in the United Kingdom, and among other points of interest, have investigated the recent discoveries of M. Chevelier Clausen, in rendering common flax subservient to the purposes of cotton. From a little shilling pamphlet, just published by Mr. John Wiley, of this city, we learn that the principle of the discovery by which flax is adapted for spinning upon cotton, wool, and silk, independent of flax machinery, consists in destroying the cylindrical or tubular character of the fibre, by means of carbonic or other gas, the action of which splits the tubes into a number of ribbon-like filaments, solid in character, and of a specific gravity less than cotton, the upper and under surfaces of which are segments of circles, and the sides of which are ragged and serrated. This is effected by boiling the flax for about three hours, either in the state in which it comes from the field, or in a partially-cleaned condition, in water containing about one half of one per cent. of common soda. After undergoing this process, the flax is placed in water, slightly acidulated with sulphuric acid; the proportions of acid used being 1 to 500 of water. This process, producing as it does, a complete separation of the integral fibres from each other, is equally adapted for the preparation of long fibre for the linen, or of short fibre for the other branches of textile manufacture. When required to be prepared for linen, all that is necessary, after the above process, is to dry and scrutch it in the ordinary way. The advantages which this mode of preparation possess over any other mode in use, are stated in the official report of the proceedings at the Royal Agricultural Society to be the following:—

1. "That the preparation of long fibre for scutching is effected in less than one day, and is always uniform in strength, and entirely free from color, much facilitating the after process of bleaching, either in yarns or in cloth.

2. "That it can also be bleached in the straw at very little additional expense of time or money.

3. "That the former tedious and uncertain modes of steeping are superseded by one perfectly certain with ordinary care.

4. "That, in consequence of a more complete severance of the fibres from each other, and also from the bark and boon, the process of scutching is effected with half the labor usually employed."

Editors' Table.

IMPORTATION OF POTATOES.—We understand several arrivals from France have brought large quantities of French potatoes to this country, reported to be of an excellent quality. Think of this, farmers, and pause!

SALE OF SHORTHORN CATTLE.—We understand that Mr. J. G. Kinnaird, of Lexington, Kentucky, has recently sold two cows and three calves for \$315; also a heifer calf, ten months old, for \$100, and three bull calves for \$250. Although these prices are not what they ought to be, still, they are so much better than those ruling in the west for the past ten years, that it is quite encouraging. We understand that shorthorns are quite in demand now, which breeders are selling much more readily than formerly.

TREATISE ON THE HISTORY AND MANAGEMENT OF ORNAMENTAL AND DOMESTIC POULTRY, by Rev. E. S. Dixon, with large additions by J. J. Kerr, M. D. Dixon is one of the best and most agreeable writers on this subject that England has yet produced; and the republication of the second London edition of his work, by Messrs. E. H. Butler & Co., of Philadelphia, with the additions by Dr. Kerr, will be well received in this country; though we cannot wholly agree with the writers in all their statements in regard to the value of some of the different varieties of fowls. There are 26 beautiful engravings of various fowls in this work, and those which are accurately drawn add greatly to its value. We have looked upon these engravings, upon the whole, with much pleasure, though we think the Shanghaes and other eastern breeds rather flattered in the shortness of their legs, while the Malays figured here, as belonging to Mr. Cope, are far inferior to such as are bred in this vicinity. Dr. Kerr, we understand, is about to establish himself in this city, where he will keep for sale choice varieties of fowls.

HISTORY OF THE UNITED STATES OF AMERICA, from the adoption of the Federal Constitution to the end of the Sixteenth Congress. By Richard Hildreth, in three volumes. New York: Harpers, pp. 705, octavo. Second series. The first series of this sterling work, it will be recollected, received our warmest approbation. It comprised in three volumes the story of the colonial and revolutionary times; the second series, of three volumes more, embrace the period subsequent to the adoption of the Federal Constitution, the present one being an impartial account of the administration of Washington, a period of the greatest importance, as having fixed upon the Federal Government that character and those methods of administration which it has ever since retained; important, also, for the origin and array of the party divisions which form a chief subject of the entire history. The work is well written, neatly got up, and should be placed on the shelves of every library.

AGRICULTURAL SURVEY OF NORTH CAROLINA.—The legislature of this state passed an act for this, as well as a geological and mineralogical survey of the whole state. They will find that they never made a

more profitable investment than the liberal appropriation for the above survey. If properly conducted, it will reveal untold millions of treasure in the soil of this good old state.

POTATOES—NEW CROP.—James W. Gordon, of this county, presented us on Tuesday last, the 11th inst., with a fine mess of potatoes, many of them fully as large as hen's eggs, of this year's growth. He states that they were raised in this way: He had left some of the potatoes undug in the ground where they grew last year. About Christmas last, he covered the ground over with straw about 18 inches thick. During the warm days in January, he discovered the potato vines coming up through the straw, and concluded to let them grow, and see what they would do. The last spell of cold weather killed the vines, and on examination, he found them dead and rotting some two or three inches below the surface of the straw, and supposing them to be entirely dead, commenced removing the straw, and found to his surprise, a fine crop of young potatoes, neatly embedded under the straw, and to all appearance in a very flourishing condition. He also states that many of the old potatoes had taken a second growth, and attained a very large size.—*Georgia Paper.*

DEATH OF JOHN S. SKINNER.—While on a visit to Baltimore last month, Mr. Skinner accidentally fell and fractured his skull, which caused his death. He was the oldest agricultural editor in the United States, having commenced the *American Farmer*, in 1819. He carried on this for about twelve years, and was then made postmaster of Baltimore. From that period, till the year 1845, he continued most of the time in government employ, when he came to New York to edit the *Farmer's Library*. This ceased in 1849, when he removed to Philadelphia and commenced the *Plow, Loom, and Anvil*, of which he was editor at the time of his death. Though somewhat too diffuse in his style, and rather overgiven to flattery, Mr. Skinner was a vigorous writer, and his whole heart seemed engaged in the cause of agriculture and manufactures. He has done much in his writings for the improvement of these great industrial branches, and deserves the gratitude of his country for his labors. He was a large, fine-looking man, open and frank in his manners, persevering and energetic. His loss will be deeply felt by the community. His age at his death could not have been far from 70.

DEATH OF HON. ISAAC HILL.—Mr. Hill was a printer by profession, and long edited a democratic paper at Concord, N. H. During this time he was thoroughly devoted to politics and his party, and rose to be a senator of the United States, and governor of New Hampshire. For the last twelve or fifteen years of his life, he gave up politics, and became the editor of an agricultural paper, called the *Family Visitor*. This he edited with much ability, and it proved a highly useful publication to the farmers of New England. He was about 65 years old when he died. He was a man of strong passions, and of a very energetic character.

Review of the Market.

PRICES CURRENT IN NEW YORK, APRIL 17, 1851.

ASHES, Pot,.....	100 lbs.	\$5.00	@	\$5.06
Pearl,.....	do.	5.69	"	5.75
BALE ROPE,.....	do.	9	"	11
BARIC, Quercitron,.....	ton.	33.00	"	35.00
BEANS, White,.....	bushel.	75	"	1.50
BEEFWAX, American, Yellow,.....	lb.	20	"	27
BOLT ROPE,.....	do.	11	"	12
BONES, Ground,.....	bushel.	45	"	55
BRISTLES, American,.....	lb.	25	"	65
BUTTER, Table,.....	do.	15	"	25
Shipping,.....	do.	9	"	15
CANDLES, Mould, Tallow,.....	do.	10	"	13
Sperm,.....	do.	25	"	50
Stearine,.....	do.	25	"	30
CHEESE,.....	do.	5	"	10
COAL, Anthracite,.....	2,000 lbs.	4.50	"	5.00
CORDAGE, American,.....	lb.	11	"	13
COTTON,.....	do.	9	"	14
COTTON BAGGING, Am. hemp,.....	yard.	15	"	16
FEATHERS,.....	lb.	27	"	42
FLAX, American,.....	do.	8	"	9
FLOUR, Sour,.....	bbl.	3.62	"	4.12
Ordinary,.....	do.	4.18	"	5.00
Fancy,.....	do.	5.25	"	6.75
Buckwheat,.....	do.	—	"	—
Rye,.....	do.	3.37	"	3.50
GRAIN—Wheat, Western,.....	bushel.	1.00	"	1.30
Red and Mixed,.....	do.	90	"	1.10
Rye,.....	do.	74	"	76
Corn, Northern,.....	do.	67	"	70
Southern,.....	do.	66	"	68
Barley,.....	do.	1.10	"	1.25
Oats,.....	do.	48	"	53
GUANO, Peruvian,.....	2,000 lbs.	47.50	"	50.00
Patagonian,.....	do.	60	"	70
HAY, in Bales,.....	100 lbs.	225.00	"	230.00
HEMP, Russia, Clean,.....	ton.	160.00	"	200.00
American, Water-rotted,.....	do.	140.00	"	175.00
Dew-rotted,.....	do.	10	"	11½
HIDES, Southern, Dry,.....	do.	6	"	35
HOPS,.....	100.	2.00	"	10.00
HORNS,.....	100 lbs.	4.75	"	5.00
LEAD, Pig,.....	lb.	5	"	7
Pipes for Pumps, &c.,.....	lb.	8	"	9
LARD, Corn,.....	bbl.	3.00	"	3.37
MEAL, Corn,.....	gallon.	29	"	32
MOLASSES, New-Orleans,.....	lb.	7½	"	9
MUSTARD, American,.....	bbl.	1.75	"	2.00
NAVAL STORES—Tar,.....	do.	1.25	"	1.75
Pitch,.....	do.	1.15	"	1.30
Rosin,.....	do.	2.44	"	2.87
Turpentine,.....	do.	35	"	37
Spirits of Turpentine,.....	gallon.	75	"	80
OIL, Linseed, American,.....	do.	1.05	"	1.15
Castor,.....	do.	65	"	75
Lard,.....	do.	1.25	"	1.50
OIL CAKE,.....	100 lbs.	75	"	1.50
PEAS, Field,.....	bushel.	1.75	"	2.00
Black-eyed,.....	2	2.50	"	3.25
PLASTER OF PARIS,.....	ton.	1.12	"	1.25
Ground, in Barrels of 300 lbs.,.....	bbl.	8.00	"	11.50
PROVISIONS—Beef, Mess,.....	do.	4.00	"	6.00
Prime,.....	do.	6	"	12
Smoked,.....	do.	4	"	6
Round, in Pickle,.....	bbl.	12.00	"	15.00
Pork, Mess,.....	do.	8.50	"	11.00
Prime,.....	do.	3	"	4½
Bacon Sides, Smoked,.....	do.	3	"	4
in Pickle,.....	do.	5	"	7
Hams, Smoked,.....	do.	4	"	6
Pickled,.....	do.	3	"	5
Shoulders, Smoked,.....	do.	3.00	"	3.63
Pickled,.....	do.	1.00	"	1.70
RICE,.....	sack.	20	"	35
SALT,.....	bushel.	8½	"	9½
Common,.....	do.	2.00	"	4.00
SEEDS—Clover,.....	bushel.	1.60	"	1.70
Timothy,.....	do.	1	"	—
Flax, Rough,.....	do.	3	"	—
SODA, Ash, (80 per cent. soda),.....	do.	5	"	8
Sulphate Soda, Ground,.....	ton.	35.00	"	37.00
SUGAR, New-Orleans,.....	lb.	7	"	8
SUMACH, American,.....	do.	5	"	15
TALLOW,.....	do.	15	"	20
TOBACCO,.....	do.	15	"	20
Eastern, Seed-leaf,.....	do.	24	"	25
Florida Wrappers,.....	do.	50	"	60
WHISKEY, American,.....	gallon.	40	"	50
WOOLS, Saxony,.....	do.	30	"	40
Merino,.....	do.	40	"	50
Grade Merino,.....	do.	20	"	30
Common,.....	do.	20	"	30

REMARKS.—Pork has risen since our last, while cotton has given way a trifle.

The Weather is now cold and rainy, but the season is very forward. We understand the frost has been somewhat injurious to the fruit trees in New Jersey and to the early cotton south.

TO CORRESPONDENTS.—Articles have been received from Charles Smith, George Luther, O. A. Jaques, A Visitor, and Jacob Hewes.

Whereabouts of Stud Horse American Perry.—A subscriber makes inquiry of the whereabouts of this stud horse, and is desirous to know something about its pedigree. He was a blood bay, full 16 hands high, and it is believed was raised by Daniel Sprangles, of North-Hampton County, Pennsylvania.

ACKNOWLEDGMENTS.—A package of seeds from Hon. Thomas Ewbank, Commissioner of Patents; The Pennsylvania Farm Journal, from S. S. Haldeman; Transactions of the Rhode-Island Society for the encouragement of Domestic Industry, for the year 1850.

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GREAT SALE OF SUPERIOR, THOROUGH-BRED Shorthorn Cattle.—The subscriber having more stock than can well be sustained on his farm, will offer at public auction, about 30 head of his Improved Shorthorn Cattle, consisting of bulls, cows, heifers, and heifer and bull calves, on the 26th day of June next, at his farm, 2½ miles from this city.

It is known to breeders of improved stock in this country and in Canada, that the proprietor of this herd, during the past 12 years, has, through the medium of importation from England, and selections from the best herds in this country, spared no expense to rear a herd of cattle from which superior animals could be safely drawn, for the improvement and crosses of other herds.

His importations have been derived from that eminent breeder, the late Thomas Bates, Esq., of Kirkclevington, Yorkshire, England, which herd it is well known, has recently been disposed of at public sale, by his administrators, and dispersed in many hands, and can no longer be resorted to, as a whole, for improvement. The announcement of this sale created great interest in the minds of all shorthorn breeders in England, who seemed desirous to secure one or more of these animals to mingle with the blood of their herds. At the day of sale, there was found assembled, the largest audience ever before witnessed upon a similar occasion, numbering, as it was said, from 4,000 to 5,000 persons. Among them were the best breeders in England, and several from other countries. Some of the animals brought prices which seemed incredible to many.

In the herd now offered for sale, will be included the imported bull Duke of Wellington, and the premium bull Meteor. These are Bates' bulls, and their reputation, as stock getters, are too well known to need comment. I am, however, authorised, by Lewis F. Allen, Esq., of Black Rock, one of the most prominent breeders in this country, and who has had ample means for forming a judgment, "that in no instance, to his knowledge, has these two bulls been bred to shorthorn cows of other herds, previously imported into the United States, but what the produce were superior, in general qualities, to such herds."

Most of the stock which is now offered for sale has been bred from these two bulls. The proprietor having a young bull more remotely connected with the portion of the herd, which he retains, being about 14 in number, he can part with these two valuable bulls. There will be in the stock offered for sale six young bulls, from eight months to about two years old, in addition to the two named above. The remainder of the stock will be composed of cows, most of them possessing extraordinary milking qualities, heifer, and heifer calves, all fine in symmetry and good handlers.

It is believed that no herd of shorthorns has ever been offered for sale in this country exhibiting more of the valuable combination of qualities which contribute to make up perfect animals.

A catalogue containing the pedigrees of these animals will be ready for delivery at an early period, in which the terms of sale will be fully stated. A credit will be given from 6 to 18 months. Gentlemen are invited to examine the herd at their convenience.

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Saco, Me., April 26th., 1849.

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Postponed yearly sale of full-bred shorthorns and improved dairy stock, consisting of about 50 head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved dairy stock, which is composed of the finest shorthorns, with a slight cross of Amsterdam Dutch, which, some writers say, was part of the original ingredient which composed the improved shorthorns.

I am now breeding the shorthorns, Devons, and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The cow which won the first prize as a milker, at the American Institute last year, was bred by me, and composed of the above-alluded-to dairy stock. Several of the bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All cows and heifers old enough, will be warranted in calf at the day of sale, by my imported bull "Lord Eryholme," or my celebrated bull "Lamartine."

I own two thorough-bred Devon bulls; one, the celebrated old Major; the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold, which, I have not as yet determined.

A full catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk sows, in pig to my imported boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 Southdown ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported buck "Abraham." Some of their buck lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain stock from my previous herd, but will also enable persons to procure calves from my imported bull, lambs from my imported ram, and pigs from my imported boar, all of which animals were recently selected by me in person, when in England.

The mode of warranting the cows and heifers in calf, is this: In case they prove not to be so, it shall be optional with the purchaser, on his certificate of that fact, either to receive from me \$25, or to send the cow to my farm, and I will keep her the proper time, (free of expense,) to have her got in calf to either of my bulls, which she shall choose. I will give \$25 for any heifer calf from any of the cows or heifers sold at that sale, delivered on my farm, at two weeks old.

Stock purchased to be sent to a distance, will be delivered on shipboard or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the south, in a climate to which it would not be well that stock should be transported, at that hot season of the year, may let such animals as they may purchase, remain with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post Office please pre-pay, and I will pre-pay their answers, and also a catalogue if required. Catalogues will be to be had at all the principal Agricultural Warehouses, and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time, will find my superintendent, Mr. Wilkinson, to give them the desired information when I am not at home.

Dated this 4th day of March, 1851, at Mount Fordham, Westchester county, eight miles from the city of New York, by Harlem Railroad. L. G. MORRIS.

apr 3t

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We challenge any horse in this state to show as fine stock as said horse. His colts are justly celebrated for speed, bottom, and good temper, are eagerly sought after in the market, and command prices varying from \$150 to \$500 and \$1,000. Terms, \$10 the season. Insurance to be agreed upon. Said horse will stand at the stable of James Rice, three miles north of the village of Lansingburgh. All communications addressed to J. T. Grant, P. M., Junction, Rensselaer Co. N. Y., will receive prompt attention.

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may 31 A. S. BARCOCK & Co., Albany, N. Y.

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CONTENTS.

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We would call attention to the following abstract of Dr. Sherwood's theory of medical practice, from the *Manhattan Souvenir: The Electro-Magnetic Theory of Medical Practice.*—We are not of the number who at once enter a *nil utili* upon the promulgation of a new theory, nor one differing from the dogmas of the schools. Nay, we derive a positive pleasure from the examination of ideas above the plane of orthodox and grey-bearded sciences. At this present writing, we owe no little satisfaction to the examination of a pamphlet containing the *rationale* of the late Dr. Sherwood's practice in acute and chronic diseases. The pamphlet gives a concise history of the rise and progress of the magnetic practice, and the theory appears well supported by analogy, and proved by conclusive experiments.

All the organs of the body are, without exception, covered with a kind of skin called a serous membrane, in which are an immense number of minute glands, with ducts terminating in open orifices on the surface. These glands excrete a watery fluid, by which the surfaces are kept constantly moist. The internal parts of the body, the mouth, oesophagus, stomach, and intestines are also lined with a membrane differing from the one above mentioned, in having a villous instead of a serous surface. The membranes enclose glands and numerous cavities, opening also upon the surface. These ducts and cavities are filled with a semi-fluid, or mucus, which is constantly issuing from them; and hence, these are called mucous membranes. In the human body, there are also four hundred and thirty-six muscles arranged for producing motion. These muscles are also covered with membrane, the outer sides of which has a serous, and the inner a mucous surface.

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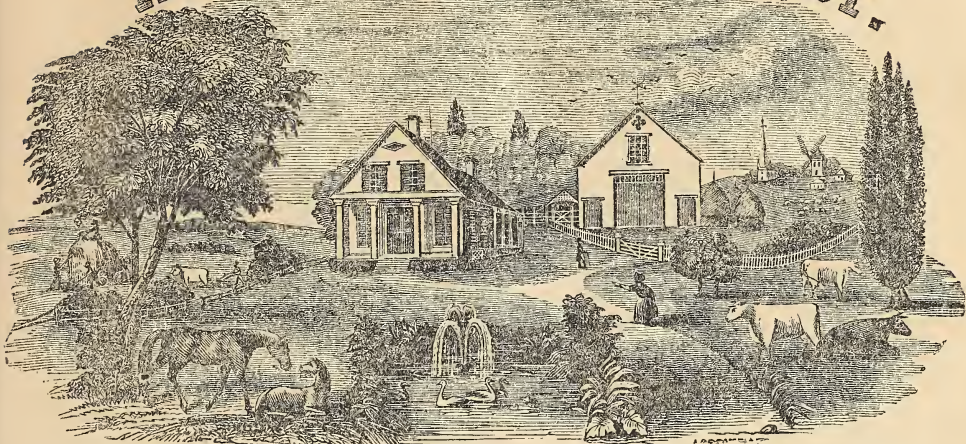
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VIRTUES OF MILK.

It is a most perfect diet. Nothing like it—it contains curd, which is necessary for the development and formation of muscle—butter for the production of an adequate supply of fat; sugar to feed the respiration, and thereby add warmth to the body; the phosphates of lime and magnesia, the peroxide of iron, the chlorides of potassium and soda, with the free soda, required to give solidity and strength to the bone, together with the saline particles so essentially necessary for other parts of the body. It contains lactic acid, or the acid of milk, which chemists inform us is the acid of the gastric juice, so requisite for the proper dissolving of our food in the stomach. It is therefore obvious that milk should be chemically correct in all its constituents, and that its beneficial effects on the constitution should not be neutralised by adulteration. "It is," Dr. Prout properly states, "the true type of all food." How necessary, therefore, is it that it should be pure; otherwise this wonderful and wise provision of providence would be a curse rather than a blessing.—*Bugg's Observations on Milk.*

A JAUNT IN OHIO.—No. 3.

A Day in Urbana.—Having received, while in Cincinnati, a kind invitation from Col. John H. James, an eminent lawyer and agriculturist, residing at Urbana, to spend a day with him on my return home, and having a little leisure, I embraced the opportunity. Stopping a couple of hours at Springfield, (already mentioned,) on my way up, I rode out with Mr. William Cooper, to see his beautiful farm, a mile west of the town, on the right border of Buck Creek, pleasantly overlooking the village and adjacent country. Mr. Cooper was formerly a merchant in Pennsylvania, and removed to Springfield about five years ago, and purchased the place where he now resides, consisting of between two and three hundred acres of as fine land as one would wish to look at or live on. He has improved it much, although at small expense; built an excellent family homestead, outhouses, and barns, surrounded them with fruit and ornamental trees, and farms it in a superior manner. As we rode up to his house, we passed a corn field, which was "worn out," as his neighbors all told him when he bought the place; but, from which, with a moderate dressing of barnyard manure, he had just harvested 70 bushels of corn to the acre; and the field was then dotted yellow with an enormous crop of pumpkins, for feeding to his cattle. On a "bottom" of the creek, lies a pasture of about 60 acres, in natural blue grass,

in which he had a herd of some 50 neat cattle, which had grazed there all summer, and had abundance of food. So fertile are many of these Ohio bottoms in pasture, that some of them will graze its ox to the acre for an entire summer. No wonder that these western lands are termed "the Paradise of neat cattle." Certainly no place in the universe can be more congenial to their growth and fattening.

Mr. Cooper bought this farm for \$28 per acre. It is now worth \$50. Neglected and worn out, when he purchased, and improved by little else than good cultivation, it would sell readily for the latter price—the result of skill and capital applied in a common-sense way. A profit of about 50 per cent. on the investment is here realised, besides a return equal to the annual interest upon the improvements on the estate. Mr. Cooper takes and reads the American Agriculturist, as he told me, and I did not wonder at his success as a farmer.

Again taking the cars, an hour and a half carried me to Urbana, and a few steps from the station, to the hospitable residence of Col. James, on one side of the town, and in one of its most beautiful and retired portions, attached to which is a wide lawn and garden, with several acres of ground in the rear, giving it a most rural appearance. As this house and grounds are a model of what every gentleman of easy fortune who resides in a country town or village may possess, I name it as an example for their imitation in convenience, comfort, and appearance. A handsome plateau of elevated grounds; a deep lawn, sprinkled with forest and ornamental trees and shrubbery; a broad vegetable, fruit and flower garden; in the midst of these an ample two-story, well-built house, with a rear kitchen, woodhouse, and other convenient appendages attached, all on a level, set well up from the ground, and you have the whole story—of household requirements I mean—that any country gentleman need wish, and all within the compass of \$5,000. Such is the retreat at which I was welcomed for the day.

A sitting of a couple of hours in agreeable conversation with an accomplished and charming family, in a spacious and well-filled library; a luxuriant and wide view from the house top, of town, field, and forest, spreading over a soil of inexhaustable fertility; and a stroll in the garden, talking pomology and cultivation, while in the examination of tree and plant, and fruit, and flower, brought us to the dinner hour. At the table, a light hock and a sparkling champagne, pure and delicious, both the

produce of the Catawba grape, of which my host grows considerable quantities, accompanied the repast.

Dinner over, and we were up for a ride. A pair of fine roan filleys were attached to a light spring wagon, and we set off some half dozen miles in a northerly direction, to a grand prairie farm, of some 1,100 acres, belonging to Col. J. Passing immediately through the town, which is well built, containing some 3,000 people, with a spacious court house, several churches, a market, and many handsome residences, we took the main road through a magnificent farming country of rich lands, broad fields, large crops, and occasional herds of choice cattle, grazing by the road side, on the rich pastures. Good farm houses and out buildings were seen in every direction, and the whole view betokened agricultural wealth, ease, and comfort. On a fine road, over a slightly undulating country, an hour's time, during which we made occasional stops to examine objects which particularly interested us, brought us to a gate, which opened into a grand oak park, or forest of "barrens,"* through which we drove at a spanking trot for a mile or two to the farm. At the termination of the road, on a beautiful elevation, we stopped near the farm house, and walked out on a point which jutted into the prairie. A richer sight hardly could be spread before the eye of one who loves a soft and beautiful scene in nature. Immediately below us, stretching away to the west, under a mild October sun, lay the broad prairie, the faded grass just tinged by the recent frosts, and dotted with cattle. Beyond, stood the magnificent beech, oak and maple forests, their luxuriant leaves slightly touched with the "green and yellow melancholy" of early autumn; while in another direction lay broad fields, rich in the recently-gathered corn harvests, or a springing growth of wheat, and these, too, bounded by another forest, shut in all away from the sound, and noise, and clatter of the world; so lone, so luxuriant, so beautiful, the *beau ideal* of a scene in western agriculture!

Gazing our fill of this delightful picture, we again mounted our seats, and returned by another road into the highway, and by other fine farms and dwellings to Urbana. Owing to the level surface of the country, streams and

springs are not abundant. In many places, the farm stock are supplied with water from wells, and the water raised by pumps driven by windmills. We stopped to examine some of these, which are frequently seen by the road side. They are exceedingly simple in their structure, and built at an expense of fifteen or twenty dollars. The shaft, or piston, of the pump is attached to a crank on the axle of the wings. It is seldom out of order, and driven by the lightest breezes. They lift any required quantity of water when kept steadily at work, and when not employed are held at rest by a simple hook in the frame work, which is caught in a staple in one of the wings. I cannot but commend this simple contrivance to all who have not running streams or springs for stock purposes.

Although a lawyer, and constantly engaged in large practice in the higher courts, Col. J. has devoted much attention to agricultural pursuits, and done much, both by his example and purse, to advance the agricultural interests of the state. He was a member of the association which first imported the shorthorn cattle from England into Ohio, in 1834, 5 and 6, several of which he kept on his estate. He is now breeding some fine Devons for working oxen, and Ayrshires for the dairy; and by his liberality and public spirit is accomplishing much good to his immediate neighborhood. Would that such examples were more frequent among gentlemen of means and intelligence! While in Madison Valley, a region eminently adapted to the breeding, grazing, and fattening of cattle, I was anxious to inquire the fate of the descendants of the shorthorns which Col. James had brought into this neighborhood; as he, with a most commendable spirit, had introduced them more for the improvement of the herds of his friends and neighbors than for his own immediate benefit. They were distributed in different localities in the vicinity, and used for some years with much zeal and spirit. But with the novelty of their use, the spirit of the cattle breeders flagged, and but a few years elapsed before the characteristic supineness of the farmer proper, let them gradually pass away with scarce an effort to resuscitate or renew the blood in its purity, or maintain the quality of the herds they then possessed. And now, although there are some individual grade animals of good quality and appearance to be found, a general sinking of value in their neat stock is the consequence of such neglect. This, in a country so prolific in forage, and congenial in climate, is inexcusable. An

* "Barrens" are broad tracts of gravelly limestone land, sparsely timbered, chiefly with white oak, and but little underbrush, very common in Ohio and other western states. Although fertile in the production of corn and wheat, and for general agricultural purposes, they were thus termed by the early settlers in contra-distinction to the many timbered lands, prairies, and bottoms, which possess a darker and moister soil.

infusion of new and pure blood is required to improve the quality and refine the coarseness, which the careless breeding of their cattle has produced. And so long as good and choice animals are to be found, particularly in this state, and of recent importation from the best herds in England, the neglect of western cattle breeders is inexcusable. The efforts of Col. James to improve the stock of his country are untiring; and although he has now chosen different breeds for his own purposes, those who prefer shorthorns as their farm stock, should at once procure the proper animals, and breed up to the mark, as formerly. But the great trouble with the Ohio farmers is, they live too easily and abound in too great plenty to be quick to their interest in anything requiring an extra amount of exertion or outlay of capital, unless by spasms, as in 1834, 5 and 6.

To northern men, who hear of the vast fertility of the west, and particularly that of the broad river vallies which intersect the state of Ohio, such as the Scioto, the Miami, and Mad River, they would suppose that with such abundance of Indian corn, wheat, oats, grass, &c., &c., all must be of the first quality, and produced in the greatest perfection. But on examination, they will be sadly disappointed. The corn, which is the great crop of the west, is good, but the stalk, of which so great use is made with us as fodder in winter, is coarse, and harsh, and only the blade is of any value, and even that, owing to the careless mode of curing it—or rather not curing at all—is too often of little or no account. Straw is no better, nor half so plenty as with us, as little care is taken of it; and what little hay is grown, (not half the quantity being required for winter forage as with us,) is spoiled in the curing. I never saw such poor hay as at Cincinnati, musty, washed, over ripe, and tanned to death in the making. Col. James told me that hay is usually kept out a week to ten days after cutting before it is housed, or put in stack! Cattle, of course, will not thrive, nor even winter well on such hay alone; but the well-stored corn cribs are at hand to make up the deficiency, and the quantity consumed by farm stock, hay included, is enormous. And I have no doubt one half of this extravagant and wasteful expenditure might be saved by properly curing their grass and corn stalks. But the land yields so bountifully, that there is little hope of reform for a long time to come. In conversing on this subject with some agricultural gentlemen, who saw and deplored the wasteful habits of their people, I remarked that it would,

in the end, result in a God send to the people if their lands could become as impoverished as those of Eastern Virginia! For the farmers would then go to work, and by a good system of cultivation, restore them to their original fertility; and the knowledge thus acquired by necessity, would stimulate them ever after to a proper economy in husbanding and consuming their crops; and as a consequence, of keeping up the fertility of the soil.

Among other objects showed me by Col. J., was a pile of peat, nicely cut up, and piled under a shed, for fuel. He discovered an extensive bed of this in a bottom near his residence. The abundant supply of wood will probably long prevent this article from coming into use; but at some distant day, it may be resorted to for fuel. After tea, as the evening was chilly, he had a fire lighted from it in the open chimney of the dining room, where it burned clear and bright for several hours, reflecting its ruddy light upon the cheerful group composed of his own family and guests, who sat around it. It was my first sitting by a peat fire, and long shall I remember the agreeable incidents which accompanied it. A gentleman, Judge M., of Bellefontaine, and two interesting daughters made a part of the party. He was born and brought up in the immediate vicinity of the Indian tribes, who, until a few years since, inhabited a neighboring county, and related to us many traits of Indian life and character. Thus, in agreeable intercourse passed away the evening, closed by an assemblage round a table spread with a substantial lunch preparatory to the departure of Judge M. and myself, which came quite too early upon our scene of enjoyment. As the hour of ten drew near, the distant whistle of the locomotive compelled us to bid adieu to the hospitalities of Col. James and his agreeable family, and in a few moments we took the cars in their upward route, my companion to his home, an hour and a half distant at Bellefontaine, and myself through a night-long and sleepless ride to Sandusky, where I arrived at early morning.

In a leisure hour, I may give you some account of a day in and around the interesting country bordering Sandusky. A VISITOR.

SHEEP IN THE RIO GRANDE.—A gallant officer of the United States Army writes us from Texas, that they have just established a flock of 2,000 Merino sheep on the banks of the Rio Grande, their pasture fields to be the late battle ground of Palo Alto. This is putting the soil to much better use than to support the strife of hostile armies.

HORSES IN BELGIUM.

THE Luxembourg, inhabitant of the "fanges," resembles, in some of his habits and peculiarities, his northern compeers. His chief pursuit, after his small agricultural operations are disposed of, is the breeding of horses, and this he conducts on a very extensive scale. The little horses of the Ardennes are nearly as unique in their way as the Shetland ponies. The frequenters of Spa will remember how they have visited some of the most pretty and romantic spots in the neighborhood by the aid of these animals, which are renowned for their endurance, frugality, and longevity. Like their masters, they live, no one knows how, on the sparsest of diet, picked up at random from the scattered crumbs of Nature's table; yet it is by no means uncommon to see specimens of these horses, which have passed through 30 years and more of the hardest labor, knocking about the world, little cared for, poorly fed, yet always sturdy and ready for work. They are much in request all over Belgium. In the districts of Herve and Verviers, where they are very much employed, it is the custom of the owners, after the poor animals have gone through a hard day's work, to turn them adrift at night, with a bell attached by a small rope to the neck, to get their livelihood as well as they can. In the morning, the owner seeks about for his horse, each man knowing the sound of his own bell. The animal never strays very far away; he is soon caught, and then begins another day of labor, notwithstanding his master's neglect of his commissariat necessities. For post, or for light cavalry horses, these little Ardennese beasts are invaluable. Luxembourg exports, yearly a large number to France, Germany, the Netherlands, &c. In the first eight months of the year 1850, there were no fewer than 9,500 horses and colts exported from Belgium, of which the majority came from Luxembourg. The horses bred in the Campine—chiefly, however, on the larger farms and in the villages—are a larger and taller race, more fitted for the harness or the saddle. They make good coach horses. In agriculture, the peasants generally employ cows or oxen. The production of horses is enormous in Belgium. The official statistics give nearly a million as the annual number in the nine provinces. Of these, 98,000 are put down as the proportion of Luxembourg and 73,000 of Limbourg. Of late, the government have endeavored to spread in the different provinces a new and *per se*, a superior kind of horses. The official reports affirm that the ex-

periment has been attended with the best results; but it still remains to be seen how far these new races will supersede those indigenous to the Campine and the Ardennese. In Belgium, it is not very difficult for a man to keep a horse. A hundred francs will buy a very respectable-looking little nag—not very ornamental, perhaps, but decidedly useful. The price, indeed, is so low, and the low-priced horses are so very generally used, that those who formerly devoted themselves to the breeding of a better sort of horses are now giving up the attempt. Some excellent stallions have been purchased in England for that purpose, but, except for luxury, the experiment is not very generally kept up.—*London Morning Chronicle*.

SIDE-HILL DITCHING AND LEVEL CULTIVATION.

THIS is what is more needed throughout all the cotton-growing region than anything else which now suggests itself to us. It is idle to talk about using better tools, plowing deeper, or manuring lands in a country that has so little *real estate*; for certainly that cannot be called *real* which is liable to run off into the Gulf of Mexico or Atlantic Ocean, in the first heavy shower after it is plowed. Yet this is the condition of much of the land upon which cotton grows. As it must be kept clean by cultivation, and is continued in cultivation as long as it will produce, is it any wonder that a very light soil plowed up and down hill for years, with a plow that merely scratches the surface, should so soon ruin land; and consequently exhibit such broad wastes of old fields covered with gulleys, pines, and broom straw, which we see in every district that has been cleared of forest a dozen years, and often much less, serves to produce the sad effect?

The remedy for this is entirely easy, if commenced with the first cultivation of the land; and even after much of the mischief has been done, it will prove very efficacious. Shall we give the process generally approved by planters who have tried the system most extensively?

However undulating may be the surface of your field, let all the rows be laid off perfectly level. To do this, first establish one row upon any given point of the field by the levelling instrument, and then make four to six more upon each side as near parallel to that as can be done by the eye of the best plowman, who must be set to work off for the other to bed up upon. Now, from the outside row measure off for four or six more rows, and then establish a second level by the instrument. In this way, go over

the whole field, no matter how undulating the surface, make all the rows level. If planters could be persuaded to plow deep, that is, eight or ten inches, and use the subsoil plow in stiff lands, this would answer a very good purpose without ditches. But as that will not soon be done, the next step is to cover the whole ground with a series of open drains, sufficient to take up all the water that falls upon the side hill, and conduct it safely away.

As the whole value of the improvement consists in the accuracy with which this work is done, the first step necessary is, to provide good instruments. The cheapest and best one for plantation engineers is what is called the *rafter level*. To make this implement, cut out two strips of light pine, one inch by three, a little over twelve feet long and put them together in a triangle with a stiff girder between, three feet from the bottom, so that you have a true triangle of exactly twelve feet sides, one of which is open. Now set it upon its feet exactly level, and then, at a convenient height for the person who is to use it, put another girder across with a spirit level setting on it. Fasten one end of this cross bar with a stout screw, and then bring the other end to a point that indicates level and fasten it. Reverse the feet of the rafter to prove your plain is level, and your instrument true. Now if you take this to the field and move it along a given line, that line will be an exact level. To lay off a ditch with a fall that experience has proved to be about right, screw on a block so as to raise one foot of the rafter three inches, and as the feet are just twelve feet apart, that gives you a fall of three inches to every twelve feet, or a grade of 100 feet to the mile, which will carry the water without any danger of washing, particularly as the ditch will grow up in grass during summer. If, however, the ditch is very long and has to carry a great deal of water, it may be more safe to lower the grade towards the outlet to two or two and a half inches to the rafter space. One of the great secrets of success in such ditches, is to make them of ample dimensions, and so near together that a gully cannot form between them. The rows being level and the ditches on a grade will cross many of the rows, so that an accumulation of water sufficient to break over and form a wash, will find its way out of the end of the row into the ditch, and so be conducted safely out of the field.

If the outlet of the ditches can be carried into the woods, or into some other situation where it will not form a gully, it should always be done.

Make the ditches broad and round so they can be crossed over with a plow, and be cleaned out with a dirt scraper. If you find at any time they are wearing, put dams across or other obstructions sufficient to prevent the difficulty. No definite rule can be given how near together these ditches must be placed, as that will depend upon the pitch of the hill and texture of the soil—they may vary from five to fifty yards apart.

Besides saving the land, side-hill ditches, wherever tried effectually, have greatly increased the product of the land. The reason of that is obvious. Rain water contains a great deal of fertilising property. If it runs off suddenly, not only that is lost, but a great deal more is carried with it. When it is held by the ditches, it penetrates through the lower bank of the ditch and enriches the land below, so as to show a visible increase upon several rows of corn or cotton. It is a system of artificial irrigation, which, like that system wherever practised, makes the land more productive.

Some persons object to level rows, because, upon a very hilly field, it makes the rows too long. This objection is easily obviated by turning at every ditch crossing, or if you prefer it, make as many short rows as you like, but do not stop the ditch so long as it will run upon that grade; keep winding around the hills, and whenever the line comes to an old wash, fill up below and cross it, unless it is past all hope of redemption; and even then, it is better to carry the water from it than empty the ditches into it. After a very hard rain, the owner, overseer, or some competent driver ought to go over all the ditches and see where there are any defects, or any alterations required, and if any breach has been made in a new ditch, have it repaired at once.

SHOULDER LAMENESS.

A FEW days ago, we went to see a mare which had been lame for many weeks past, and had her near fore leg repeatedly and severely blistered from the foot to the knee, under the suspicion that the seat of mischief was somewhere covered by the application. The practitioner in attendance did not pretend to state either the precise situation or nature of the disease causing lameness, but chose, nevertheless, to be doing something by way of remedy. The owner of the mare finding she did not improve, and being doubtful of the practitioner's knowledge of the case, requested him to discontinue any further attendance. When the mare was made to walk she did not betray any great amount of actual

limping, but in the trot, she was exceedingly lame, and in both paces, there was a rolling outwards of the upper arm bone, as though it was luxated at the shoulder joint. The muscles covering the outer surface of the shoulder blade were so much shrunk, that the middle ridge of the bone was particularly prominent, and the outer aspect of the shoulder altogether presented a flattened appearance, as compared with the opposite side. The case was evidently one of what is called "shoulder slip;" and so palpably plain were all the symptoms of this affection, that the wonder is how it could ever be mistaken for any other. The owner of the mare had remarked to the practitioner previously in attendance, that he thought the shoulder was the seat of lameness; the only reply was—"No, Sir, it is only wasted for want of use." This is not the first case in which we have seen shoulder slip, so called, entirely overlooked, and overlooked too by veterinary surgeons, graduates, by-the-bye, of our southern veterinary school. The disease consists in the first place of rupture of the muscles outside the shoulder blade, and in subsequent absorption or wasting of these consequent on having their natural capabilities of contraction and tone destroyed. It is this loss of active and passive contractile power which muscles naturally possess, that allows the head of the upper arm bone, (humerus,) to roll outward when weight comes upon it, and we consequently observed that this rotation outward, and attendant lameness, are always greatest when the horse, thus affected, is going down hill. In the majority of cases of this kind, a cure may be effected by applying counter irritants repeatedly over the seat of disease, by continued rest, and a few weeks' run at grass.—*North-British Agriculturist*.

BROWN CORN.

AFTER giving the Brown corn a fair trial for years, I can truly say I think it valuable as a partial, but not for a general crop in this latitude. Its most valuable quality here, is its early maturity. It ripens two or three weeks before other corn, and this is highly advantageous to our farmers here, for we now winter few but our breeding swine, and it becomes more and more the usage to fatten the spring pigs in the fall. For this purpose, the Brown corn comes in just at the right season to feed our pigs; it is consequently very desirable for every farmer to raise a small quantity of it for the purpose of early feeding. It also comes very early for soiling stock, if wanted to feed green.

As to its cultivation, it requires a warm, rich soil, and should be planted in hills one and a half feet apart, the rows two and a half feet apart, three stalks left in a hill. It will bear very close planting, and is all the better for it, and gives a much larger yield. If in drills, the stalks should stand within six inches of each other, and the drills be not over two and a half feet apart. Plant early in June. H.

Poughkeepsie, N. Y.

EXPERIMENTS IN OATS AND BARLEY.

WE wish our farmers would report more experiments for the agricultural press than they are in the habit of doing. It would be much to their individual benefit, as well as that of our readers.

We find in the *Edinburg Journal of Agriculture* for March, the details of an experiment by Mr. Shaw, with fourteen different varieties of oats. We would gladly quote the details of this experiment in full, but as we have not space in our journal, we must be contented with giving the results.

The oats produced from 37 to 73 bushels per acre, weighing from 37 to 39½ pounds per bushel. The product of straw was from 3,117 to 3,500 pounds per acre.

In the same journal, Mr. Sinclair Sutherland reports an experiment with eight different varieties of barley. The yield was from 54 to 86 bushels of grain per acre, weighing from 48 to 57½ pounds per bushel, and from 3,234 to 5,684 pounds of straw.

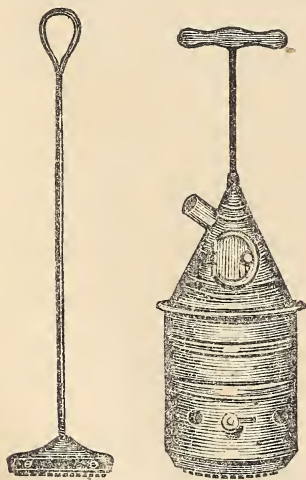
VALUE OF SEWERAGE WATER.

By recent experiments made with great care, on the London sewerage waters, it has been found that good soils will combine with and retain the fertilising ingredients contained in their own weight of water. Professor Way's estimate is, that the soil will do much more than this. Reckoning the soil at 10 inches of depth, it is computed that 1,000 tons, or 224,000 gallons of sewerage water may be thrown upon the soil and drained through it, (by means of well-constructed subsoil drains,) and the absorbing power of the soil will strain out of the water and hold for the benefit of its future vegetable growth, all the fertile matter the water contains. By accurate analysis, this quantity of London sewerage water is found to contain about half a ton of ammonia, besides potash, phosphoric acid, and the whole class of organic manures, in their most desirable state for ministering to vegetable growth—equivalent to an application of three tons of the best Peruvian guano to every acre.

The monstrous waste of manures daily sustained in the city of New York may be inferred from this—a loss proportionably shared by every city in this, and most other countries. A portion of this waste is inevitable; but a much larger portion might be saved, not only without inconvenience and expense, but with a vast saving, also, to the health and comfort of our citizens; such, for instance, as in the removal of slaughterhouses, and every species of loathsome manufacture, that is connected with animal or vegetable remains in an offensive state. We have seen the ends of our piers and docks so loaded with the offal from the neighboring butcheries, that it had filled up the entire depth below, and was giving off its noisome odors, to breed pestilence and contagion around. All these and numberless other sources of manures, might, with the slightest efforts on the part of our municipal authorities, be removed from the city and made to contribute to the fertilisation of the earth, instead of poisoning its inhabitants.

APPARATUS FOR BRANDING.

THE cut below represents a very convenient and useful apparatus for branding various kinds



BRANDING APPARATUS.—FIG. 40.

of agricultural implements and machines, barrels, and boxes of merchandize, and the horns of animals.

It consists of a small case of iron letters and figures, which can be confined in an iron holder, with a handle, by means of a small screw, so as to form a word, number, or the initials, that may be desirable to mark; together with a small, portable furnace for heating the type when ready to operate. All things ready, the

marker has only to heat the holder containing the type, and then stamp the articles that are required to be marked.

GERMAN AGRICULTURE.

EACH German has his house, his orchard, his road-side trees, so laden with fruit, that if he did not carefully prop up and tie together, and in many places hold the boughs together with wooden clamps, they would be torn asunder by their own weight. He has his corn plot, his plot of mangold wurtzel, or hay, for potatoes, for hemp, &c. He is his own master, and he, therefore, and every branch of his family, have the strongest motive for constant exertion. You see the effect of this in his industry and his economy.

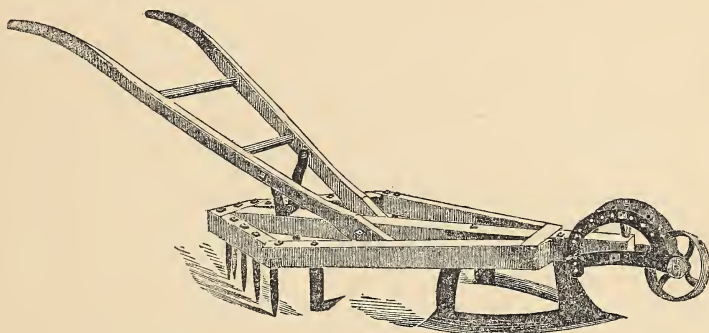
In Germany nothing is lost. The produce of the trees and the cows is carried to market, much fruit is dried for winter use. You see it lying in the sun to dry. You see strings of them hanging from their chamber windows in the sun. The cows are kept up for the greater part of the year, and every green thing is collected for them. Every little nook, where the grass grows by road side and river, and brook, is carefully cut with the sickle, and carried home on the heads of the women and children in baskets, or tied in large cloths. Nothing of any kind that can possibly be made of any use is lost, weeds, nettles, nay, the very goose grass which covers waste places, is cut up and taken for the cows. You see the little children standing in the streets of the villages, in the streams which generally run down them, busy washing these weeds before they are given to the cattle.

They carefully collect the leaves of the marsh grass, carefully cut their potato tops for them, and even if other things fail, gather green leaves from the woodlands. One cannot help thinking continually of the enormous waste of such things in England—of the vast quantities of grass on banks, by road sides, in the openings of plantations, in lanes, in church yards, where grass, from year to year, springs and dies, but which, if carefully cut, would maintain many thousand cows for the poor.

To pursue still further this subject of German economy. The very cuttings of the vines are dried and preserved for winter fodder. The tops and refuse of hemp serve as bedding for the cows, nay, even the rough stalks of the poppies, after the heads have been gathered for oil, are saved, and all these are converted into manure for the land. When these are not sufficient, the children are sent into the woods to

gather moss, and all our readers familiar with Germany will remember to have seen them coming homeward with large bundles of this on their heads. In autumn, the falling leaves are gathered and stocked for the same purpose. The fir cones, which with us lie and rot in the woods, are carefully collected and sold for lighting fires.

In short, the economy and care of the German peasants are an example to all Europe. They have for years, nay ages, been doing that, as it regards agricultural management, to which the British public is but just now beginning to open its eyes. Time, also, is as carefully economised as everything else. They are early risers, as may well be conceived, when the children, many of whom come from a considerable distance, are in school at six in the morning. As they tend their cattle or their swine, the knitting never ceases, and hence the quantities of stockings and other household things which they accumulate are astonishing.—*Howitt*.



COTTON-SWEEP CULTIVATOR.—FIG. 41.

THE PURIK SHEEP OF THIBET.

A RAM and three ewes of this breed have been recently sent to England, where they have proved themselves wonderfully prolific. They attain early maturity, and when grown, weigh 30 to 40 pounds. They are hardy and easily reared, and are commended as excellent substitutes for the poor man's dog.

Mr. Moorcroft, who travelled extensively in their native country, some years since, thus describes their pet-familiar habits. "The Purik sheep, if permitted, thrusts its head into the cooking pot, picks up crumbs, is eager to drink the remains of salted and buttered tea or broth, and examines the hands of its master for *latro*, (barley flour,) or for a cleanly-picked bone, which it disdains not to nibble. A leaf of lettuce, a peeling of turnip, the skin of an apricot, are also its luxuries."—*English Paper*.

BATHING.

IN our humble opinion, many of the diseases of mankind might be avoided by the simple performance of this cleanly duty. There is no excuse for its non-performance, by the common plea, we have no convenience for bathing. Yes you have. There is no occasion for going heels over head into the mill pond to perform ablution of the entire person. True a good bathing tub or convenient shower bath is useful, but not indispensable, because the skin can be kept perfectly clean by the use a common wash bowl and coarse towels. By the solid matter thrown off by perspiration and accumulating dirt, the pores of the skin become clogged, and are rendered unfit properly to perform their functions.

A clean skin is not only conducive to the bodily, but to the mental health. Clothe a civilised race in rags and filth, and how soon they will become savages. No one can be clean who does not daily, or at least weekly, bathe in some way, the whole surface of the body.

COTTON-SWEEP CULTIVATOR.

THIS implement is made expressly for the purpose of taking the place of the cotton sweep, besides doing much additional work. It is made with sharp steel and iron flat teeth, with the addition, also, of a well-arranged set of harrow teeth, so as to cut up all grass and weeds, at the same time finely pulverising the soil. It can be expanded or contracted, to suit every width of row. It works so lightly that one mule can draw it.

AN ENGLISH BULL.—An honest farmer thus writes to the chairman of an English agricultural society: "Gentlemen, put me down on your list of cattle for a bull."

WORTHLESS FURNITURE.—A lazy woman is the most worthless furniture a man can have.

PORK—BACON—HAM.—No. 3.

In choosing a breed of pigs which is intended to be sold to parties who follow the business of bacon curing, the size of the breed will be greatly determined by the market in which they are to be disposed of. Very large fat bacon is principally required for the mining districts of Warwickshire, the Potteries, and the manufacturing districts of Lancashire and Yorkshire. "Middles" are also sent from London and Liverpool to the agricultural counties. Generally speaking, large-sized bacon is the favorite kind amongst farmers. The objectionable feature in the larger breeds is the length of time they require before arriving at maturity; whilst growing, they doubtless increase in size at a small expense of food, and will eat matter that will be refused by fattening pigs, and in this respect, perhaps, they are the most valuable animals of any; that is, to fare by chance. If, however, they have to be maintained on food which has to be specially provided, I cannot think that they will yield an equal quantity of meat, when fattened and killed at from 18 months to two years old, as would be formed were the same amount of food given to the Essex breed, killed at from 9 to 12 months old, or the Berkshire at from 12 to 15 months old, at which ages it will be found most profitable to kill these respective breeds.

With regard to fresh pork, it is brought in two different forms to market; in the first stage, in what may be termed "porklings," the carcass weighing from 40 to 80 lbs. each; in this state, the carcass is jointed into hams, hands, spare ribs, loins, and belly pieces. The spare ribs and loins are always used as roasting pieces, the hams indiscriminately for roasting and pickling. The hands and belly pieces are always pickled; for this purpose, no breed answers so well as the Essex. In this state, the outside fat and skin, or "crackling," as it is called, is cut along with the lean part, and so served at table.

The other form in which fresh pork is sold, is when the pig has arrived at a pretty mature state and fit to make bacon. The only parts, however, sold as fresh meat, are the spare rib and loin, together with steak pieces off the shoulder. Along with the loin and spare rib, some persons cut out the whole of the ribs, but this is a bad practice, as the short ribs greatly assist in curing the bacon, and should always be left on the side. The ribs should be divided with a saw midway between the breast and back bone; a sharp knife should now be em-

ployed to cut out the lean or muscular part of the neck and loins from its exterior covering of fat, the cutter up having previously divided with a saw, the large bone and the pelvis, commonly known as the haunch, or aitch bone. He commences cutting at the neck, and makes a clean cut down to the ham, leaving only a thin portion of the muscle, or lean part, about the thickness of a shilling, attached to the fat or back part, as many more cuts are made in the same direction as are required to separate the joint up to the point where the ribs had previously been divided by the saw. Steak pieces for frying or making sausages and pies, may be now cut off the lean part of the hand, which permits the shoulder bone being easily separated. The fore shank may either be cut out or left in; if for home use, it had better be cut out and used as pickled pork. The ham can now be cut off, commencing where the ham joins the flank, and cutting so that the outside skin will form a circle or ellipsis with the skin that lines the inside of the ham. This mode of cutting up pigs is not much practised for home curing, and for that purpose is without doubt the most profitable.

A plan is followed in the west of England and south of Ireland, in such places as Waterford, Cork, Carrick, &c., in all which places it is the practice to singe the pigs intended for bacon. I have not described the mode of killing and scalding pigs, as that is generally well understood, and a professed butcher is usually employed for the purpose; singeing is, however, not so generally known. The pigs being first knocked on the head, generally five or six in number, are instantly drawn to a place immediately contiguous, and placed with their necks over a trough prepared to receive the blood; they are then stuck in the neck with a knife in the ordinary manner; whilst they are bleeding, a man with a fork distributes a thin covering of wheat or rye straw; the stronger the straw the better for that purpose. In the absence of wheat or rye straw, furze and heather are used as substitutes. The straw is now set fire to in the direction of the wind; if the man sees that there is not enough, he applies more to those parts requiring it, but in a general way, with practice, the quantity required is applied sufficiently at first, the tender having merely to adjust the burning straw, taking from those parts where it appears to be scorching the skin too much, and putting it on those places where the fire appears too little; this he does by using a common hay fork. When burned out, which

is done in two or three minutes, the hogs are turned, and the underside, now uppermost, undergoes the same operation; this completed, they are drawn with ropes and pulleys on hooks, similar to those seen in all slaughterhouses. The rough dirt, singed hair, &c., are now scraped off; warm water being constantly thrown over the carcasses, when another scraping commences. In a general way, three scrapings, one without and two with water, have to be gone over before the skin is deemed sufficiently cleaned. The cleaning finished, the entrails, viscera, &c., are taken out in the ordinary way, water is thrown over the whole carcass, inside and outside, and left to cool; in winter time, this will always occur within 24 hours. When cold, a man goes round and cuts the heads off; he then takes a knife and makes a clean cut from the tail along the centre of the back bone to the termination of the neck, baring the whole of the vertebræ; he now takes a sharp cleaver, and, beginning at one side of the back bone, commences separating it from the ribs at the points of their attachment. The other side is then cloven in the same manner; by this means, the vertebræ are cut clear out; he then cuts the ham about three inches above the knee joint. Thus divided, a side at a time is carried to a table where another operator is in readiness, who first makes an incision near the neck, where the fore ribs inosculate so largely with the back bone, commonly known as the breast bone; these, together with four or five pounds' weight of the pectoral muscle, or breast, are cut out, as it is found by experience that this part does not bleed well, frequently containing several of the larger blood vessels still gorged with blood, especially in large pigs, and in consequence is not well adapted for curing; it is an act of precaution always to be recommended; it has also the effect of baring the scapula, or shoulder bone. The latter, in ticklish weather, is sometimes found a formidable difficulty in the way of good curing, or, as it is technically termed, "striking the meat," and taking the salt, the former term applying to saltpetre, and the latter to the common salt used. This portion of the breast being taken out, the ribs are divided with a fine saw at the point named in the first-described mode, namely, about the middle; the upper division is cut out with a portion of the muscle attached to them, leaving the lower portion of the ribs adhering to the side. In Ireland, the piece so cut out is called a "strip," and weighs according to the size of the pig, from two to four pounds' weight. In

the west of England, it is called the "griskin," and usually weighs from five to eight pounds; by way of parenthesis it may be stated that the griskin is a most delicious morsel. The cutter is provided with a semicircular saw; with this he dexterously divides the small knuckle of the femoris, or thigh bone, and detaches it along with the pelvis, or haunch bone. The muscle connected with the pelvis and a thin cut from the upper part of the inside of the thigh are taken out with the pelvis; by this means, the awkward joint which gives so much trouble to housekeepers and others in curing hams is cut out, and the curer obtains free access to the knuckle, or superior extremity of the thigh bone, in order to rub in the saltpetre and salt; without this process, it would be almost impossible to cure the whole side of a pig, namely, shoulder, belly, back, and ham, in one piece.—*Journal Royal Ag. Soc.*

KENTUCKY FARMING AND CATTLE SHOWS.

BEFORE leaving Virginia for Kentucky, I wrote you that I expected to be present at the Bourbon agricultural show commencing the 24th of September, and you were kind enough to express a wish that I would give you a description of it. Circumstances have prevented me from complying with your request until this time.

In going to Kentucky from South-Western Virginia, you enter it through Cumberland Gap, through which all the stock from Kentucky, destined for the Virginia and southern markets pass. I will not attempt a description of the country, further than to say, that after leaving Virginia and passing the gap, the first hundred miles in Kentucky is through as uninviting an agricultural region as I ever beheld. It is not until after you cross "The Big Hill," some 40 or 50 miles from Lexington, and get fairly into Madison county—the great swine county of Kentucky—that you enter "Old Kentuck." You are transported at once, by a ride of ten or a dozen miles, from one of the most sterile regions imaginable, into the midst of a rich and luxuriant country, the rural beauty of which is not surpassed by any other, and must be seen to be appreciated. It is here that "the home of the shorthorns" may be said to commence; and the cultivation and the stock get better and better as you advance towards Lexington. It is about 16 miles from Lexington to Paris, in Bourbon county, over a good McAdamised road, affording a fine drive for the ladies, who attend the show in great numbers.

The show was held in a beautiful grove about

a mile from the town, containing ten acres, which were purchased by the society, and have been handsomely improved, by the erection of tents for the judges, and booths in which different kinds of refreshments were provided. In addition to these, there was a very neat building fitted up as a dressing room for the ladies. I have no idea how many spectators were present, but by 11 o'clock, they had nearly filled every part of the show ground; and about one half were ladies, amongst them some of the most beautiful and accomplished of Kentucky's daughters.

The first day was the "ladies' day," and was devoted to an examination of domestic manufactures, of which there was a good assortment. There was considerable competition in the different classes, and the articles reflected great credit on the exhibitors. But as it would take up too much space to particularise all the different articles which were shown, and give the names of the successful competitors, I will pass to the second day, on which the cattle, sheep, and hogs were shown. And here I will remark, that the arrangements for the convenience of the spectators, and display of the stock, were most admirable. There is a hollow in the ground containing about one fourth of an acre, fenced in with a neat circular fence about three feet high. Outside this fence, the ground rises some ten or twelve feet, around which seats are placed, somewhat on the plan of the seats of a circus. Into this ring, the different classes of stock, which are all well halter broken, are led, and as soon as one class is examined and passed upon, are let out and another brought in. I think this a much better arrangement than to have the animals tied in stalls, some distance apart; for the judges having each class together, and immediately under their eyes, can come to a much more accurate decision.

There were about 130 head of cattle, all shorthorns, and a most superb lot. This was the fifteenth show, and I was informed by several, who had attended them regularly, that the exhibition of cattle, was fully equal, if not better, than on any previous occasion. Most of the animals in each class were choice specimens, possessing great merits and excellence, and such as were highly creditable to the owners. I was at the show in 1849, and I thought the present one much superior. The premium on aged bulls, was taken by Mr. Abram Renick, with Buena Vista. I intend to describe Mr. Renick's stock more particularly hereafter, and will say nothing about this bull at present. The

two-year-old premium was taken by Mr. C. W. Innes, with John Moore. He is white in color, very large of his age, having weighed 1,703 pounds, a few days before he was two years old. He is an animal of imposing presence, an excellent handler; and, notwithstanding his size, fine in his points, with a clean neck and head, deep rib, and as fine a thigh as I ever saw. In another year, when his form comes to be more fully developed, he will be hard to beat. He was bred by Dr. Kinnaid, of Fayette county, who also showed some first-rate animals. The doctor is a very fashionable breeder, and has taken more premiums, and bred more premium animals, probably, than any other breeder in Kentucky. His cow Olive, with which he took the premium on aged cows, in competition with 24 others, is a magnificent animal. She is but four years old, has been suckling a calf since March, and weighed the day of the show 1,850 pounds.

I would gladly give you the names of the different premium animals, and their owners; but, being comparatively a stranger, I could not recollect them all. I will, however, give you the weights of some of them, and see whether you can beat them in New York. Mr. C. W. Innes got the premium on aged bullocks. His was five years old and weighed 2,740 pounds; he showed two others, one weighing 2,790 and the other, 2,710 lbs. He has about 40 of the "same sort," and has promised to send me the weight of each, which, when I get them, I will send you. Mr. E. G. Bedford's premium three-year-old weighed 2,464 lbs. Mr. Hughe's two-year-old weighed 2,073 lbs. Mr. Hutchcraft's fat heifer was estimated to weigh 1,500 lbs. nett.

The show of sheep was very good. They have but two classes in Kentucky. Sheep for mutton and sheep for wool. In the first, some excellent Cotswolds were shown, and in the latter, some fine Saxony. The show of hogs was what might be expected in Kentucky, and I understood the premium boar weighed 794 pounds. I did not stay to see the horses, which were exhibited on the third day; I understood, however, the show was never better. There were about 150 on the ground, among them some fine blood horses, roadsters, and cart horses. There is not half the number of horses raised in Kentucky that there was a few years since, the farmers having turned their attention, mostly to the raising of mules, which they find much more profitable at present prices. Good suckling mules sell very readily at \$50 each. To give you some idea of the Jacks and mules,

which were shown on the fourth and last day, I send the height of some of them. Mr. Howard's Jack which took the premium, was two years old last May, and measured 15 hands $3\frac{1}{2}$ inches high. His owner refused \$2,000 for the half of him. One of the two-year-old mules was 17 hands high. The premium yearling, 15 hands 3 inches, under the standard. There were 18 mule colts shown; the premium colt measured 14 hands high, and I understood a gentleman present offered \$95 each, for the lot. I have not room to say anything more about the Bourbon show, as I wish to give you a short account of the Lexington show, which took place the next week.

A few years since, there were some ten or twelve agricultural societies in Kentucky, all of which, however, were suffered to go down except the Bourbon Society. Last spring, the citizens of Fayette county formed an agricultural association called the Lexington Agricultural and Mechanics Association, and purchased a beautiful grove, adjoining the town of Lexington, called Maxwell's Springs. It contains 25 acres, and the society gave \$5,000 for it, \$200 per acre. This they have fitted up in a very handsome manner. They have already expended about \$5,000 in the erection of buildings, and have not yet completed their arrangements. The cottage for the ladies is the neatest affair of the kind I ever saw, and cost, I suppose, some \$2,000. The Kentuckians do everything on a big figure; and by thus providing for the comfort and convenience of the ladies, vast numbers attend from all parts of the state, and look forward to the show as a sort of gala day. There was a much greater variety of domestic manufactures than at Bourbon. There was a most gorgeous display of silk quilts, and some of fine silk velvet, which I thought, however, a very useless expenditure of money. If premiums are given for silk quilts, they should be for such as are made out of Kentucky silk, where the cocoons have been raised, the silk spun and woven by the exhibitors. As it was, the quilts looked as though they might cost about \$100, and were rather too fine to sleep sound under.

The remarks which I made in reference to the stock shown at Bourbon will apply to those shown at Lexington. Nearly all the premium animals which were exhibited at the former show were at Lexington; and I doubt whether the stock of cattle, for size or excellence, can be surpassed in the United States.

Mr. James G. Kinnaird, whom you saw at the New-York State Show, was very successful in

getting premiums at Lexington; and he richly deserved them. He is of good stock himself, and the stock which he showed had the appearance of having been evenly and finely bred. His cow Almira, which received the first premium, is unsurpassed as a handler. And Mary Ann, another aged cow, I heard an excellent judge of cattle say, he considered one of the finest cows in Kentucky. His premium two-year-old heifer, Arabella, is one that a breeder is apt to set aside for his own use. His three-year-old bullock, which received the premium, weighed on the Lexington hay scales, the evening after the show, 2,250 pounds. I have not time to enumerate all the fine stock shown, and will pass them over for the present.

I was glad to see that choice stock were in considerable demand, and that several were sold during the two shows, at very fair prices. Mr. George M. Bedford sold his bull calf, which received the premium, both at Bourbon and Lexington, for \$150.

The country around Lexington is generally considered, I believe, the garden spot of Kentucky; and I doubt whether its beauty and fertility can be surpassed. The farms are generally in the highest state of cultivation; the buildings handsome and convenient, and some costly and magnificent. The grounds around them are kept in the neatest possible order, and the woodland pastures, tenanted with the choicest stock of every description, affording ample evidence of the wealth, as well as intelligence and taste of the owners. Kentucky was settled mostly by Virginians; and judging from the uniform kindness, and hospitality with which a stranger is treated wherever he goes, I should say they were descended from the F. F. Vs. (first families of Virginia). Hospitality has always been a prominent and leading characteristic of the Kentuckians, and to this may be added nearly every other quality which adorns and beautifies human life. I was everywhere treated with a kindness and attention, which I had anticipated from the character of the people. The vast concourse of people who were assembled on the show grounds, were of themselves an interesting show; and if I wanted an ameliorating cross for man or animal, there is no state in the Union, in which I would sooner seek it. I know several states that would do well to import some 500 or 1,000 Kentuckians and improve their present race. It would be difficult to find a finer looking, or more intelligent body of men assembled together, than the one on the Lexington show ground.

Among the distinguished Kentuckians present, were Mr. R. Wickliffe, and his brother, Governor Wickliffe. It is a name not unknown to fame. Mr. Clay got home on the evening of the second day, and was present a short time on the third day. The shout with which the Kentuckians received him, gave evidence of the mighty hold he has upon their admiration.

Virginia, Dec., 1850.

A. S. M.

The above article from our respected correspondent has been on hand some time. The reason of its delay is owing to the publication of Mr. Kinnaird's letter in our February number, anticipating it, in part. However, the subject is so important, and so well and differently treated, a little repetition, we hope, will have the effect of more thoroughly rousing the attention of our readers to the great interest of stock improvement. It is astonishing how slow this thing progresses; our farmers want line upon line, precept upon precept—here a little and there a *great deal*.

The article on Mr. Renick's stock shall follow in our next.

PLANK ROADS.

AMONG the many improvements in the means of communication which have been prosecuted in the last few years, plank roads are assuming a very important rank. A little work, by Mr. Kingsford, of the Hudson-River Railroad, is of great interest, and should be well circulated throughout the country. It appears that the first plank road in Canada was laid down in 1836, and in New York, in 1837; but it is only within the last four years that they have been much prosecuted. The number of plank roads in operation in Canada and the state of New York are as follows:—

	Canada.	New York.
Number of roads,	—	19
Number of miles,	442	2,106
Average cost per mile,	\$1,700	\$1,833
Total cost,	\$773,500	\$3,860,292

Very nearly four millions of dollars have been expended in New York upon these roads, and the resulting advantages are immense. The roads have all been subscribed for by individuals, and all pay handsome dividends. For instance, the Troy and Lansingburg road pays 10 per cent., semi-annual; the Utica and Burlington, 20 per cent.; and we believe none in operation pay less than 10 per cent., and none of the stocks can be bought in the market.

The importance of plank roads in farming re-

gions becomes self-evident, when it is stated that on the Salina road a two-horse team drew *six tons* of iron twelve miles without unusual strain. Four and a half tons is an ordinary load, and a team will travel with it eight hours per day, four miles an hour, day after day. A farmer, in a heavy country, stated that the tolls paid saved themselves in the *labor of cleaning horses*. In all localities where these roads are in operation land rises greatly in value. On the Salina road, farm land rose from \$9 to \$15 per acre. On the Syracuse road, the increase was \$10 per acre. It will be observed that an amount of property equal to \$4,000,000, bearing a high rate of interest, has been created, and that the property has added in addition several millions to the value of the land through which it runs, and that all this property is mere saving from the old cost of transportation. As the existence and operation of these roads is but little known out of their localities, we append the following statistics:—

Names.	When opened.	Length, miles.	Cost per mile.
Great Western, Albany,	1849	11	\$2,555
Fonda and Carogo,	1849	18½	1,850
Fultonville and Johnstown,	1849	5	5,000
Rome and Utica,	1848	15	5,000
Northern Road, Utica,	1848	22	1,713
Utica and Burlington,	1849	5½	2,100
Rome and Oswego,	1847	60	1,500
Rome and Western,	1849	11	1,500
Rome and Taberg,	1849	9	1,300
Rome and Madison,	1849	22	1,250
Salina and Central,	1847	16	1,500
Syracuse and Manlius,	1849	8	1,200
Syracuse and Bridgeport,	1849	12	1,400
Syracuse and Oswego,	1849	32	1,300
Salina and Liverpool,	1849	11	1,400
Syracuse and Tully,	1848	25	1,100
Split-Rock Head,	—	—	1,500
Hannibal and Oswego,	1848	11	2,000
Do. do.	1849	5	1,300

Every section of the country should be lined with these roads as tributaries to the railroads. Their progress at the west is very great already.
—Reporter.

SUGGESTED REMEDY FOR THE POTATO ROT.—Mr. George Luther, of Martha's Vineyard, North Carolina, from some experiments made on the potato, is of the opinion that if farmers would take the tops and transplant them, it would be the means of securing a healthy crop.

CHARRING POSTS before setting them into the ground makes them last much longer.

A NEW DRAINING PLOW.

We find the following account in an English paper of a new draining plow. We know nothing of its merits other than what we see stated; but its construction strikes us favorably, and should the following description do nothing more than incite our ingenious mechanics to get up something similar, our object in copying the article will be effected. We presume this plow will be exhibited at the World's Fair in London.

Mr. Cotgreave's principle consists of a series of plows derived from the carpenter's plane; in fact it is nothing more nor less than a land plane; and when seen, every one must wonder why the principle now brought into operation has not been applied years ago. With the exception of the main drains, all the work, even to the obtaining the perfect level of the drain, is performed by the plane plow. Mr. Cotgreave has so adapted his plow that with four horses he can throw out a drain from four to five feet deep. The saving of time is another material object. The work by this process is almost incredibly expeditious, and very little damage is done to the surface; indeed, in grass lands, a heavy roller will repair all damages. The cost of workmanship is half the price of manual labor, on the present system; and the time occupied one tenth, while the work, to say the very least of it, is as efficiently and durably performed.

We now proceed to the detail of the plow. We find that the necessary staff of men is ten, and of horses four; and with this at command, Mr. Cotgreave will be enabled, without distressing either horses or men, to commence two statute acres in the morning, and finally complete, that is, cut the drains, (including the main drain,) lay the pipes, fill in and make good the surface of one statute acre, and half prepare the second to be ready for work the next day. The plow, as we have already explained, is on the plane principle, and, by means of screws, can be adapted as occasion requires, even while in operation in the cutting, to take a shaving or two, three, four, five, or six inches in depth. This control of the plow is most necessary, as it must be evident that certain portions of the land, requiring to be drained, frequently have undulations; and if there were no regulating principle, it is quite certain no water level could be obtained by a plow. This point, we particularly impress on the attention of our readers; because every practical man, at first, would enquire how this difficulty is to be overcome.

THE SHORTHORN COW GRACE.

The accompanying cut of Mr. Stevens' cow Grace, presents her very fairly, but not flatteringly. We are indebted to B. P. Johnson, Esq., secretary of the New-York Agricultural Society, for its use; and it is taken from the volume of the Transactions of the Society for the year 1850, which is just published.

This fine cow, known in the English Herd Book, vol. 8, as Her Grace, and in Allen's American Herd Book as Grace, was bred by Lewis F. Allen, of Black Rock—was white—calved in 1841; got by Victor, (9,780,) 177; dam, Daisy by Bertram II., (3,144,) 21; grandam Delight, by imported Devonshire, (966,) 51; g. grandam Daisy by Admiral (1,608); g. g. grandam Yellow Rose, by young Denton (963); g. g. g. grandam imported cow Arabella, by North Star (460); g. g. g. g. grandam Aurora, by Comet (155); g. g. g. g. g. grandam by Henry (301); g. g. g. g. g. g. grandam by Danby (190). The figures in parenthesis are the numbers of the bulls named in the English Herd Book, the others, those in the American Herd Book.

Grace, in the possession of Mr. Allen, had one calf at *fifteen months old*. At two years old, he sold her to Mr. J. F. Sheafe, of Dutchess county, who bred three calves from her. At six years of age, she was sold to Ambrose Stevens, who bred one calf from her. All these calves were bulls; one, only of which, now survives, unfortunately, the others having been killed during the depression of prices for shorthorns a few years since. Grace had no calf after 1848, and as it was supposed that she had done breeding, she was commenced to be fed in January 1850, and was killed in March, 1851, in New York.

Grace was shown at Poughkeepsie, in 1844, then only three years old, at the show of the New-York Agricultural Society; and though only a heifer, won the third prize for cows. In 1847, she was awarded the first prize as the best milch cow at the show of the New-York State Agricultural Society, at Saratoga; and in 1850, she won the first prize as the best fat cow at the show of the same society at Albany.

Grace was a fair milker, having yielded 16 to 19 quarts per day for months; and she gave 10 quarts per day in April or May, on hay alone, nine months after calving; and her milk was particularly rich.

Grace was fed fourteen months, and was slaughtered in New York in March, 1851. On being killed, it turned out that she was far advanced in calf, at least six months. Her live weight on the day of being slaughtered, was

1,795 pounds; her calf and appendages weighed 60 pounds; thus leaving her actual live weight 1,735 pounds. Her carcass weighed 1,210 pounds, her hide 101 pounds, and her tallow 153 pounds. every 100 pounds of live weight, making her shrinkage less than 16 per cent. Her tongue, liver, heart, and tripe, if weighed, would have reduced her shrinkage to 14 per cent.



AMBROSE STEVENS' SHORTHORN COW GRACE.—FIG. 42.

Total weight, 1,464 pounds; shrinkage, 271 pounds. This is a yield of 84 pounds, 6 ounces and a fraction of an ounce of dead weight to It is undoubtedly true that this cow was the fattest and best beast ever killed in this country. Had she not been in calf, her dead weight would

have been still better. Her beef was beautifully marbled and sparkling in the highest degree; and she was wonderful for the large amount of lean meat in her carcass, the depth of muscle on her ribs being actually greater than ever has been seen in this market for a beast of her size. In this respect, she exceeded a very fine ox killed with her, whose carcass, (four quarters,) weighed 1,588 pounds, which was remarkable for the depth of his lean meat.

Grace was fed by Colonel Sherwood, of Auburn, and was the joint property of himself and Mr. Stevens.

French, were of that happy nature which disposed them to encourage the early inclinations of talent in the minds of their children. They soon perceived in the subject of these remarks that love of the woods and fields, which has since made him so conspicuous as a naturalist.

In his sixteenth year, that is, about 1796, he went to France to pursue his education. He received lessons in drawing from the celebrated David. Although he prosecuted his studies sedulously, his heart still panted for the sparkling streams and interminable forests, for his "native land of groves." He returned home the



JOHN JAMES AUDUBON.—FIG. 43.

JOHN JAMES AUDUBON.

THE following biographical sketch, we condense from the American Phrenological Journal, which we trust our readers will consider no less than a just tribute to the name of one whose life was spent for the benefit of mankind, whose usefulness, high principles, and worthy motives are alone sufficient to record his fame:—

Mr. Audubon was born about 1780, in the state of Louisiana. His parents, who were

following year, with a kindled ardor for the woods, and commenced a collection of designs, destined shortly to swell into that magnificent series of volumes which the world has applauded as the "Birds of America." They were begun on a beautiful plantation which his father had given him, situated on the banks of the Schuylkill. There, amid its fine woodlands, its extensive fields, its hills crowned with evergreens, he meditated upon his simple and agree-

able objects, and pursued his rambles, from the first faint streaks of day until late in the evening, wet with dew, and laden with feathered captives, he returned to the quiet enjoyment of the fireside.

Yet the passion for birds did not seem to seal his heart to the influences of a still more tender and exalted passion. He married, and was fortunate in marrying a lady who, in vicissitude, has animated his courage, and in prosperity appreciated the grounds and measure of his success. For many years, the necessities of life drove him into commercial enterprises, which involved him in a series of calamities. His mind was so filled with nature, that all his speculations proved unprofitable. From observation and study, only, could be derived gratification. "He was compelled to struggle against the wishes of all his friends—except of his wife and children, to their lasting honor be it said—who strove to wean him from pursuits, which, in the world's eye, are so barren and unproductive. But their importunities had an effect directly contrary to what they intended. Irritated beyond endurance, he broke at last through all bonds, and gave himself up entirely to his favorite pursuits. He undertook long and tedious journeys; he ransacked the woods, the lakes, the prairies, and the shores of the Atlantic; he spent years away from his family. We think we can see him now, setting out early in the morning, with no companion but his faithful dog and gun; the tin box, containing his pencils and colors, slung to his side; now popping down the unconscious warbler that makes the air vocal from some neighboring tree; now hastening to the broad shelter of a venerable oak, to describe the form and paint the variegated plumage of his victim; now crouching for hours underneath some withered trunk, to observe the habits of some shy and timid bird; now climbing the jagged side of a rocky precipice, to find the nest eggs of the eagle that screams and flutters upon the dry top of the storm-blasted beech, still higher up; now treading upon the head of the serpent that hisses and wreaths among the thick leaves of the copse; now starting the bear and cougar from their secret lairs in the fastnesses; now swimming with lusty sinew, his gun and apparatus fastened above his head, the troubled waters of a swollen stream; now wandering for days through the illimitable and pathless thickets of the cane brake, at night sleeping upon the hard ground, or across the branches of trees, and by day almost perishing with thirst; and now hailing with pleasure, at

sunset, the distant but cheerful glimmer of the lonely log-cabin fire.

In person, Mr. Audubon was tall, with a fine, elastic form, and most striking appearance. His face, with its aquiline nose and keen eye, sometimes reminded one of the beak of the eagle. His action was quick, and his conversation lively and spirited. Owing to his French extraction, he spoke with an accent, in a soft and gentle voice, but with great earnestness of conviction. He was noted for the simple heartedness and kindness of his disposition; his habits were temperate and frugal, and his attachments to the different members of his family profound.

For several years past, Mr. Audubon had lived at a beautiful estate called Minniesland, on the banks of the Hudson, some eight or ten miles from this city, where the beauty of the scenery, and the kind hospitality of its distinguished occupants, made it an agreeable resort for all who had the honor of their acquaintance. His health, however, for the last two years, had been failing. His long and arduous labors began to wear upon his constitution, and on the 27th of January last he died. His funeral was as unostentatious as his life had been. He was buried in the family vault of Trinity-Church Cemetery, adjoining his own estate. His widow, two sons, and numerous grand children are left to mourn his loss.

What a life has that been of which we have here given a faint outline! What a character is that of which we have made only a rough sketch! Is not John James Audubon an admirable specimen of the hero as a man of science? For sixty years or more, he has followed, with more than religious devotion, a beautiful and elevated pursuit, enlarging its boundaries by his discoveries, and illustrating its objects by his art. In all climates and in all weathers; scorched by burning suns, drenched by piercing rains, frozen by the fiercest colds; now diving fearlessly into the densest forest, now wandering alone over the most savage regions; in perils, in difficulties, and in doubts; with no companion to cheer his way, far from the smiles and applause of society; listening only to the sweet music of birds, or to the sweeter music of his own thoughts, he has faithfully kept his path. The records of man's life contain few nobler examples of strength of purpose and indefatigable energy. Led on solely by his pure, lofty, kindling enthusiasm, no thirst for wealth, no desire for distinction, no restless ambition of eccentric character, could

have induced him to undergo so many sacrifices or sustained him under so many trials. Higher principles and worthier motives alone enabled him to meet such discouragements and accomplish such miracles of achievements. He has enlarged and enriched the domains of a pleasing and useful science; he has revealed to us the existence of many species of birds before unknown; he has given us more accurate information of the forms and habits of those that were known; he has corrected the blunders of his predecessors; and he has imparted to the study of natural history the grace and fascination of romance.

By his pencil and his pen, he has made the world eternally his debtor. Exquisite delineations of the visible and vocal ornaments of the air, drawn with so much nicety, colored with so much brilliancy, as they are seen in their own favorite haunts, who can adequately describe?

A peculiar ease, vigor, and animation mark Mr. Audubon's written style. His descriptions of birds in their various moods are not the dull and dry details of a naturalist, but the warm, lively, picturesque paintings of a poet. To open at any page of his volumes is to step at once into a region of agreeable forms and enrapturing sounds. He seems to enter into the very spirits of birds themselves, sings when they sing, and rises upon the wing when they fly. And his whole life, like theirs, seems to have been a perpetual and cheerful ascription of praise, to that

"Power whose care
Teaches their way along the pathless coast,
The desert and illimitable air—
Lone wandering, but not lost."

A CHAPTER ON FOWLS.

HAVING been inundated of late with ever-so-many letters, soliciting me for Dorking fowls, for which the writers appear willing to pay almost any price, and ask me to send them almost any distance—and to which, I regret to say, that I have been obliged to send refusals, owing to my having only my season's breeding stock on hand—it reminds me that I sometime ago promised you an essay with the above-named title.

I am not a chicken merchant, broker, nor even an extensive chicken raiser, breeding only for my own use; and why it is that everybody sends to me for Dorkings, I know not, other than that in some of the lately-published poultry books, I am mentioned as one of the first importers of them into this country; and the writers of these letters, perhaps, suppose that of course, I could have no other object in view but

to breed and sell them. True, I have bred a great many Dorkings during the nine years in which I have kept them; but I have given away two where I have sold one; and I am forced to say, that in nine cases out of ten, among the *gifts*, but a beggarly account has ever been rendered of their *good* results where I have inquired after them; abundantly confirming the old adage, "light come, light go." The short of it is, those who had them, paid no sort of attention to their breeding, although profuse in their promises to do so when asking for them; and they either "run out" by mixing with other fowls—got their necks wrung, and into the pot, "by mistake," or some other equally calamitous affair happened to close up their Dorking account; yet, as the poultry fever has of late waxed high, and the Boston world and pretty much all other parts of the American world who "take the papers," have caught, and are catching this same fever of "Shang-high"—and all the other "high-low-Jack-and-the-game," as I *guess* it will prove to be, by the time they get through with these sorts of poultry—I have pretty much made up my mind to "spread" myself this year, and put every hen I have to cackling and sitting as rapidly as possible, and assist in supplying this wholesome demand for "improved breeds" of fowls, so far as the Dorkings are concerned.

It is quite needless for me to attempt to improve upon the good advice which our pleasant friend Solon Robinson has given your readers, after visiting the grand crowing match at Boston, last October, on the merits of which he has drawn such capital conclusions; and were I not considered an interested party in the question, I might give my own opinions upon the merits of this stupendous fowl excitement; and even as it is, I shall venture to talk a little about it.

You know when we were little boys together, we dwelt near the sea shore, and in the neighborhood of New York, and used, sometimes, to go on board the India ships as they arrived in port, and see all the strange things which the captains brought home in the way of poultry. This was towards 40 years ago. Well, the first real improvement that I recollect in the fowl line was what we boys, (I mean all the boys,) used to call the "Merino" hens. Everything was "Merino" in those days; for it was about that time, say 1810, that the Merino sheep were brought into the neighborhood; and our father bought a Merino ram, and introduced into his flock; for which all the neighbors ridiculed him,

although some of those who abused him the most, and vowed they would kill him if he got among their sheep, were afterwards caught letting their ewes into the paddock at night, where he was kept by himself. Well, these Merino hens came somewhere from the East Indies, and looked like young ostriches, running about the yard with hair on, and only a few feathers on their wings and in their tails. Their eggs, for now and then they laid one, were about the size of a common hen's egg, of a salmon color, and sometimes a little speckled, like a Guinea hen's. These Merinos were white, yellow, or sooty-brown in color; and when crossed with the common dunghill fowl—if said dunghills happened to be a pretty good breed of themselves—made quite a tolerable fowl; but the more dunghill you got into them, the better they were. There we had the Merinos.

The next I got—for I believe you did not catch the chicken fever as often as I did—was the Malay, Java, or some other Indian name, as the Cochinchinas and Shanghaes (*a*)—though they, with the aforesaid Merinos, are all of the same origin, in fact, differing only in variety and locality, as our dunghills do—were not among the *improved* names of that ancient day. Well, I got them, the Malays and Javas. Instead of hair for a covering, these had feathers, long, thin, and light. (*b*) In cold weather, they wanted as much nursing as a baby, and would freeze to death in a frosty night as quick as a young gosling, unless well tucked up with straw, or brought into the cellar or kitchen, as I often had to do. The cocks crowed as though they had the influenza, and were great on a foot race, if a smart dunghill happened to walk into the yard. These hens laid an egg, occasionally, of the salmon or buff color like the Merinos; and the result of their breeding was pretty much the same as with them. So I progressed; but finally settled down into a flock of fowls of perhaps half, to a quarter of the blood of these improvers, as I wanted something different from what everybody else had, although other folks, with nothing but good dunghills, could raise two chickens to my one; and my excellent mother used to wonder why our hens could not lay eggs as our neighbors' did, for half the time we had not any of our own laying. To be sure, we had nice large chickens at thanksgiving and Christmas, and at other times, for the table, which used to make our friends stare when they saw them, and wonder where we got them; and that quite paid me for my trouble; but when they came to be carved, I found they preferred the plump,

juicy pullets of the common kind, which we usually had by their side. The fact was, the big ones were dry, stringy, and coarse. Thus passed my boyhood chicken experience, and then came an interregnum.

Twenty years ago, I became a housekeeper. Of course, I must keep chickens, and I got them, the best to be found, but was not anxious for the Malays, or any of their cousins-german from the Indies, so I tried the Polands. Their beautiful black plumage, and the large poppy-looking white tops on their heads, falling so gracefully over their faces, pleased me. They laid well so long as I kept them *very warm*; but the hens proved bad sitters, or rather didn't want to sit at all. The chickens were very tender and hard to raise; their bodies light, and the flesh not well placed on the carcass; and on the whole, I did not like them. A few years' experience and I let them go.

I tried the Bantams. They were pompous, strutting, little bodies; the valiant little cocks crowing about once a minute all day long, and the hens the most sociable, chatty creatures in the world. If the kitchen door happened to be open, they would be into the house forthwith—their feet into the bread trough, which was sure to be left uncovered for kneading just as they came in. If a plate with an egg or two in it happened to be on the table, or in the cupboard, Miss Biddy was sure to sit herself down at once, and lay another by the side of it, or into the closets, or the cradle by the side of the baby, or into your hat, if she could find it right side up, her ladyship was sure to make a nest. The fact is, they were charming little creatures. I loved them from my very heart, and they laid all the eggs they could; but their eggs were small, and the chickens were small, and they were small all over; and they were too pretty to kill, also; and so, betwixt these various qualities, the Bantams did not amount to much, although the children loved them, and keep them to this present day in high perfection.

Then I tried the game fowls. They were hardy, good layers, and tolerably well fleshed. But they had *black legs*, (*c*) which I never liked, and being built for strength and agility, they were not heavy fleshed on the best parts of the carcass. They were so pugnacious, too, that half the chickens had their eyes knocked out before they got to be as large as quails; and they went groping and blundering about the yard like a party who had "taken a benefit" at Donnybrook Fair. The upshot was, they did not suit me.

Then came the Bucks-county birds, swelling accounts of which I saw in the papers, and large stories were told of their multifarious excellencies. So I got a grand coop of them from New York. They proved a hybrid between the Malay, Java, or other India, and something else—no matter what—and after three or four years' trial, I packed them off with the others. These, with their various crosses on the common hen, I had, when you brought home the Dorkings for me, from England, in 1841.

These Dorkings, which were quite young when they arrived, filled with vermin from their long confinement on shipboard, and quite unpromising in appearance, I kept and bred—I liked them. They were of the speckled variety; chocolate-red in color, with white spots and stripes beautifully intermixed; large rosy combs; clean, compact bodies; short, white, or flesh-colored legs; five toes, which fifth by the way, is a superfluity, and of no use whatever; and *heavier and deeper fleshed on the breast and side bones, than any other barn-door fowl I know.* The cocks were the most brilliant in their plumage imaginable, and some of the chickens came out black speckled, their glossy coats as beautiful as the others. A year or two afterwards, I found a white Dorking cock in Albany, which an Englishman had brought out with him, and as he was a lone bird, with no females, I got him of his owner. But he did not grow up to suit me, and I never bred him to my Dorking hens. (d) My first imported cock, when eighteen months old, weighed nine and a half pounds, and one of the hens, seven and a half pounds. I never saw a more beautiful bird, either in plumage or just proportion, than that cock; and the hens were equally fine. He was the admiration of everybody who saw him, and when three years old, I gave him to a friend, who used to come three miles, as often as once a fortnight, to look at him, for months before I gave him the bird. These birds laid well, and I bred a great many chickens from them. They were the best fowls for the table I had ever seen, and were the admiration of all who saw them; but I am bound to say, they were not so hardy for this climate, 43° north, nor were they such good layers as some of our common fowls. These were the first Dorkings ever imported into this country, to my knowledge.

In 1844, you were so kind as to send an order for a fresh importation, by Captain Morgan, of the London packet ship Washington. On his way to England, a clergyman, who lived at Dorking, was a passenger. That gentleman

kindly engaged to procure some of the best chickens to be found there for Captain M., whom he told, that such could not be had of the poultry higglers in the London markets, as the Dorking fowl breeders would not send their *uncaponised* fowls away from home—capons being usually made from them, because of their full, deep bodies, and short-grained, juicy flesh. The clergyman kept his promise, and sent Captain M. a coop of a dozen, the best he could find, nine hens and three cocks. On the passage home, the chickens got the *roup*, of which eight of them died; and only four, one cock and three hens, came to me, poor as possible, all of them; and one pullet still having the *roup*, gave it to my home flock, out of which I lost upwards of twenty. This was a sad calamity, hen speaking. But I survived it, and so did the remainder of my chickens. This last importation was an improvement, if possible, on the first one. I crossed these last upon the first, in part, and some I kept distinct; and by taking pains, I have kept some of them distinct to the present day. I ought to remark that the cock of the last importation was grey, with a blue and white speckled breast. One of the hens was a rich, ashy grey; another, ashy, speckled with white; the last, a rich chocolate-brown. These hens weighed six and a half to seven and a half pounds each; the cock was not equal in size nor figure, to the first one. Some of these had heavy rose or double combs; others single ones. These fowls and their descendants, I have shown at several of the State Agricultural Exhibitions, and was always winner of the first prize. I have never seen any Dorkings to equal them; and I will now at any time show against the congregated Dorkings of these United States, either for size, plumage, shape, beauty, or whatever other quality, whether they be "Albany Dorkings," "brown Dorkings," "China," "Nankin," or any other of the *American-manufactured* Dorkings proffered and advertised in the papers at five, ten, or twenty dollars the pair. I have now some 20 fine young breeding hens, and four or five cocks, of all the varieties of color belonging to the speckled Dorkings; and intend placing their eggs at every cottage on my farm—some four or five in number—and raise all the chickens I can; so that at the New-York State Cattle Show, in Rochester, next September, I will, barring all accidents, exhibit them against any and all other fowls of any breed whatever; and supply, as far as I am able, all such as want the true unadulterated English Dorkings.

I have, within the last year, seen the "black

Spanish," a good-looking black chicken, with an enormously large, troublesome, useless comb; the "Plymouth Rock," a bastardised Malay; the true "Malay," "Cochin-China," "Shanghae," "Imperial Chinese," "Merino," or "Great Bur-rampooter," as you may please to call them, of all colors, shape, size, and fashion, except the right one, (some of them, in fact, first cousins to friend Solon's "red Shanghae," in your February Agriculturist, if not more closely related,) "black Poland," "white Poland," "African Bantam," "Bolton grey," "Creole," "English pheasant," and the latest Yankee mixture, no matter what; besides any quantity of "Jersey blues," and "Bucks-countys," sometimes all running in the same yard together, (every fresh specimen of bastardy, making a "new breed" with the hen doctors,) and ranging from \$5 to \$50 a pair!

In their selection of these fowls, I question no man's taste nor fancy; and all may enjoy their opinions. Yet I prefer the true Dorking, to any and all of them; and still, with all my good opinion of the latter, except in the superior quality of their flesh, and their magnificent plumage and shape, they are not equal to the best dunghill fowls, for profit to the farmer; but, a cross of the Dorking on a good variety of the common hen, say half to three fourths Dorking, produces the best of barndoor fowls. It is a matter of little moment to me, whether I ever sell a chicken or not, for it costs all to raise them that they will bring, in the long run; and my only object in this long story is, to tell the truth, and expose one of the most arrant humbugs, in a small way, that this *un-excitable* country has ever had practised upon it.

Black Rock, N. Y., 1851. LEWIS F. ALLEN.

(a) Our correspondent is aware that the Shanghaes, &c., are well feathered, and in this respect, differing greatly from the Merinos.

(b) This was the appearance of the Malays when first imported. They have since been greatly improved here, and are now well formed and well feathered; and among the large birds, rank, in our estimation, next to the Dorkings.

(c) Some varieties which we have seen have *yellow* legs, but whether they are a true breed, we are unable to say.

(d) Notwithstanding this unfortunate cock of our correspondent's, very fine *white* Dorkings are now raised in this vicinity and at Boston.

MANURE FOR FRUIT TREES.—Pounded bones are excellent for apple trees. A peck to each tree will not be amiss, either pounded or burnt.

REVIEW OF THE APRIL NUMBER OF THE AGRICULTURIST.

Pork—Bacon—Ham.—The greatest interest I take in reading this article, is the reflection that a hog in the country where the writer lives, is never suffered to run at large in the public highways like a roaring lion, seeking whom he may devour. Ah, but that is England. This is America, the land of freedom—for hogs.

Fish Ponds on Long Island.—And why not transplant fish and grow them for market as well as oysters?

Southern Wines.—Mr. Weller makes out a very profitable business of the grape culture—on paper. Is it so in fact? A good many attempts have been made, and few succeed, and in my opinion never will, while cotton bears such prices as it has averaged during the last half century. To change the agricultural system of a country, requires very palpable advantages to be presented. Perhaps Mr. Weller's statement does that. We shall see.

Squash-Vine Borer.—This article of Dr. Harris', independent of its scientific information, is of great value in a practical point, as it gives such directions about fastening down the vines to make the joints take root, that none but a squash head can mistake the way to raise squashes in spite of the borers.

California Hens.—Old Joe says this is not half so remarkable an account of the domestic qualities of Miss Biddy, as one we once had on board the ship Elizabeth. She used to come every morning into the galley and deposit an egg in a particular sauce pan, which he always boiled in the same vessel without removing it, for my breakfast. Are not these hens of a new breed worthy the attention of the Boston folks?

Plant Trees.—A precious little item I should think, from the way in which other papers appropriated it without credit, as a lucubration of brainless craniums, which, unfortunately, rests upon the shoulders of some editors.

Economy of Grinding Corn for Feed.—It has been proved, has it, by actual experiment, that corn, when ground and cooked, is 30 per cent. better, &c.? Well, that was proved a hundred years ago; and yet, not one in thirty do it. It has been proved, too, that it is 30 per cent. more profitable to use manure and buy good tools to farm with; and yet, look at the way that 30 per cent. of the farmers of America cultivate their land. Economy? They don't know the meaning of the word.

Manual-Labor School at Jerusalem.—If it succeeds in the Holy Land it is more than it has ever done in our own land.

Curious Facts in Vegetable Physiology.—There are a great many curious facts, friend Solon, not yet dreamed of in your philosophy. Truly, "this is a great country, as yet but little known." Not one farmer in ten knows the value of the soil he has plowed for half a century, principally because he has just skinned over the surface without seeking to know what hidden treasures lie only a few inches below. But how could he know about facts in vegetable physiology without studying them?

To Kill Cockroaches with Red Lead.—Arsenic or any other poison is equally good, and all are effectual; and yet, thousands will read the recipe and never try it.

Wheat Growing in the West.—The writer of the article under this caption gives a truthful picture of the slovenly way that wheat is sown in Michigan, and at the same time expresses the opinion that drilling wheat will soon supersede broadcast sowing. Why, my dear sir, not one farmer in ten ever heard of such a labor-saving crop-increasing machine. Not one in fifty ever saw one, and not one in a hundred believes in the advantage of using them, and not one in a thousand will buy one within the next ten years. There is something else to be drilled into their heads before they will drill wheat into the ground.

Burning Gas for Fuel.—If this should be generally adopted, I greatly fear several individuals will be utterly consumed!

Soiling Cattle.—This article is very good as far as it goes. It might have enumerated several other crops suitable for the purpose. Upon good soil, few plants can exceed barley for soiling. At the south, the cow pea would be superior to any other crop; besides, it is one of the best fertilisers, and when cut and cured, makes the very best of hay. I have found *Morus multicaulis* an excellent feed for cattle, when cut while it is young and tender. All stock that are kept up and fed with green food in summer, should be provided with salt balls to lick. These are made of clay, salt, ashes, and lime, in equal parts. The ingredients should all be pulverised fine, and sifted, and then moistened just enough to make them hold together. Soiling will never be practised to any extent in this country while land is so cheap, and while the absurd practice is continued of building expensive fences to keep stock running wild in all the commons and highways.

The Endicott Pear Tree.—A long living evidence of the virtue of the man who obeyed the injunction of wisdom, which bids him plant a

tree. Reader, go thou and do likewise. Immortalise thy name, and cause future generations to bless thee.

Prize Merino Sheep.—Pretty good for the old north state. Yankee shepherds had better have a care. Rip Van Winkle is waking up, and with a mild climate and cheap lands, may yet draw the wool over the eyes of sheep breeders who have six months of winter to contend with. But how is it about dogs, Messrs. North Carolinians? When I was acquainted in that state, some five and twenty years ago, it beat all creation for worthless sheep-stealing curs, Virginia always excepted. You cannot save your mutton and dogs, too, gentlemen. You had better buy a sausage cutter and send the dogs to the New-York Market!

Wire Fences.—I only notice this article to deny one point incidentally introduced, and that is, "stone walls are often necessary to use up the stone." It is not so. There is not a stone wall in New England, but would be of more value to the owner if buried beneath the surface to drain the soil, than it is above, where it disfigures the beauty of the landscape, affords a constant harbor for all sorts of *varmints*, and is one eternal torment to all who depend upon the abominable nuisances for a fence. So much for stone walls. If any one is hard headed enough to defend them let him stand forth. [Well, then, suppose this soil, as we have now and then seen it in New England, is already so full of stones that you cannot get them below it, or that you have no land that needs draining?—Eds.]

A New Fibrous Plant.—There are a dozen other kinds of fibrous plants besides the okra, that men will learn to appreciate one of these days. If the flax plant can be dissolved by chemical process, and its fibre converted into flax cotton, I should like to know why the cotton plant cannot be treated in the same way. It has also a heavy coating of fibre. The time may come when the pine apple will be grown in Florida for its fibre, which is superior to linen for beauty and strength. The common bear grass, which abounds upon the South-Atlantic and Gulf coasts, is another fibrous plant, the value of which has never been appreciated.

Discovery of Phosphate of Lime as a Manure.—This article has been read with more interest, perhaps, than would have been an announcement of a gold mine in the same locality. The scarcity and consequent high price produced by a general consumption of an article so limited, in quantity as bones, must always deter the

farmer from depending upon any regular additions of phosphate to his land from this source. The monopoly held upon guano by the Peruvian government, rendering it a high-priced manure, and uncertain in its supply, deters the farmer, in many instances, from seeking the needed supply of phosphates from that source, and so he contrives to work along without using anything to restore the exhausted fertility of the soil. Should the experiments now trying, prove this substance to be as valuable as reason teaches us its component parts ought to make it, it will be one of the most valuable discoveries of this wonderful age of discovery and invention. We shall look with anxiety for Mr. Bartlett's experiments, and whether favorable or not, if written out in the plain instructive style of the article under notice, his communication will be read with much satisfaction.

Deterioration of Land by Improvement of Animals.—An old song set to new music: It belongs to the same family who talk about land being ruined by lime, marl, guano, and deep plowing. The greatest improvement of animals needed in this country, is among the two-legged ones.

The Ladies' Department.—This page for April is unusually rich. Mary has tried each of the recipes, and pronounces them excellent. She wonders where you pick up so many little gems. She has determined to give you a treat of nice things, all taken from the *Agriculturist*, when you next come to make a visit to your

REVIEWER.

CHEAP VIRGINIA LANDS.

WE have repeatedly called the attention of our readers to the advantages of purchasing these lands—an advantage that a great many northern farmers have availed themselves of very much to their benefit and satisfaction. We now have information of a tract of land lying within six miles of Winchester, and within nine hours of Baltimore, in as healthy a region as can be found in the world, which is offered at an extremely low price, and easy terms, and is well worth the attention of a company of small farmers disposed to emigrate to that state. The tract contains 1,927 acres, divided into sixteen holdings, with small tenements and buildings upon each; some pretty good and some rather poor. The land is under such cultivation as is too common among tenants in this country. The soil is what is termed *slaty*, with lime stone either on or adjoining the tract, though it never has been used as a fertiliser. The surface is

rolling, and well watered by living streams and springs, one of which is a sulphur spring, highly approved for health. The neighborhood is a good one, and has but few negroes, either bond or free. Saw mills and grist mills are in operation on the adjoining tracts upon both sides. Taking everything into consideration, it would be a very desirable location for a large stock farm, with cattle or sheep, or a grain farm when renovated by guano, lime, and plaster; or it affords a most convenient opportunity for several small farmers to unite and form a pleasant neighborhood of their own. The whole tract can be had for only \$8,000. The title is beyond all dispute, having been nearly 200 years in the family of the present owner, a gentleman of great wealth and of the highest character; who has come to the conclusion that it is a duty every large land holder in Virginia ought to study, to try to induce an improving race of farmers to come and renovate her worn-out lands, instead of holding them, out of mere ancestral pride. Further information can be obtained from the editors of the *Agriculturist*.

MORGAN HUNTER.

It has been well remarked that, though a picture may convey too favorable an idea of a defective animal, yet it is impossible to portray all the excellencies of a good one. Making due allowances for the latter difficulty, the following figure may be considered a correct likeness of the horse from which it was taken.

Morgan Hunter is seven years old; was bred, as we are informed, by Mr. Exwell, of Springfield, Vt.; was got by Gifford Morgan, dam by the same horse. He was sold by F. A. Wier, of Walpole, N. H., in May last, to Messrs. Ackley & Gilbert, of East Hamilton, Madison county, N. Y., and stands the present season, at the stable of S. A. Gilbert, in that town. He is a capital specimen of the Morgan family of horses. In his general form, he possesses in a remarkable degree what Youatt lays down as the most important requisite in a stallion—compactness—"as much goodness and strength as possible, condensed in a little space." His head is fine, and his eye large and brilliant; his chest capacious, barrel round, loin very broad, back short, quarters long and muscular, flanks deep and full, limbs short jointed, flat, and sinewy. In temper and spirit, he exhibits the intelligence and docility, which characterises most of his near relatives. His action and temper cannot be surpassed, and his colts, thus far, have given universal satisfaction.

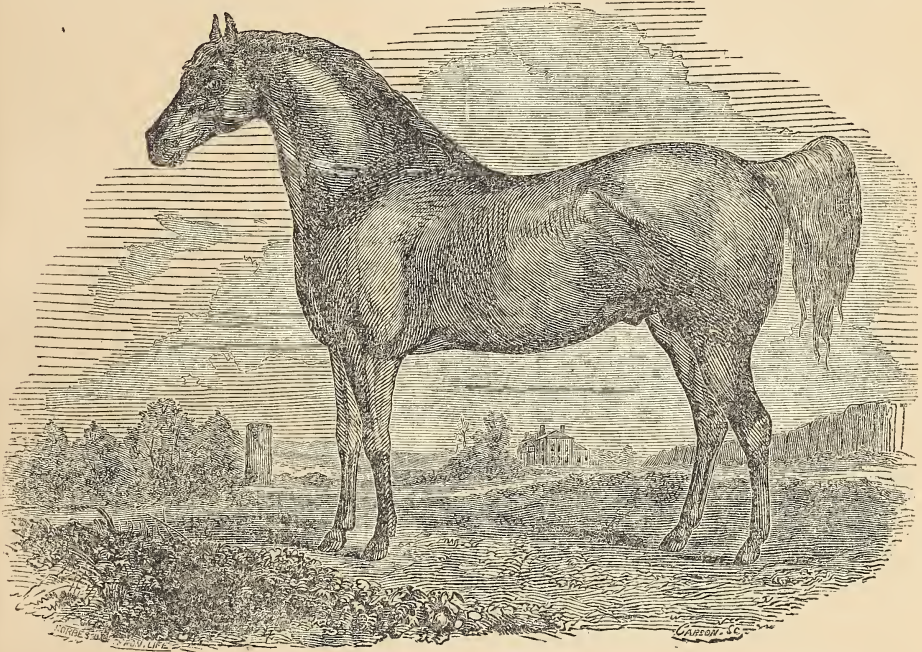
We notice various advertisements and cuts

of horses, as Morgans, in the papers of different parts of the country. A comparison of these descriptions and their originals, with the cut at the head of this article, may serve, in some degree, to show whether the animals truly represent the stock whose name they bear, or are only counterfeits.

FOWL BREEDING.

YOUR correspondent from West Meriden, (Agriculturist for May, page 149,) says, that he obtained *about* an average of 12, 22, 23, 24, and 20 eggs from 16 hens, during certain months, amounting to 101 eggs each, during the laying

a series of years, more than about 80 eggs from each, per annum? I still think not. All fowls will not lay alike—not even our common hens. But to answer the gentleman's question, and state why some lay 60, and others 100 eggs, I cannot, for I have yet to learn that there is so great a difference. I think the difference generally is from 75 to 85, or nearly so. This arises from the breed, or from the quantity or quality of their food. He says: "Suppose one should keep only the class of fowls that produce 100 eggs per annum." Now, will any gentleman give the case where he has obtained 100 eggs each per annum from his fowls, dur-



MORGAN HUNTER.—FIG. 44.

season, and he takes my estimate of 80 eggs per annum, as too low. Mr. L. says "about" 12, &c. This word "about" destroys the correctness of his statement. It might have been more or less eggs that he got, as it appears that he did not keep a correct account, or he would not have used that word, which is the grand salvo to all misstatements. I, too, said about 80 eggs per annum, as a *general* product.

Now, if one man gets only 70, and another 90, while the *general* product is *about* 80, I am correct. The word *about*, I omitted in a subsequent sentence; but no one could have misunderstood me. I admit that fowls, in some cases, in some seasons, where but a few are kept, will exceed 80; but the question is, can one keep from 25 to 100 or more fowls, and get, through

ing several years in succession? It should be observed that my remarks have all been made relative to keeping a large number of fowls, and any number less than 25 hens, would hardly be a fair criterion to judge of the correctness of my statements. Mr. L. gives his fowls a range of eight acres, and only 16 of them. They ought to lay well. Few fowls can have such a range. Give us the figures positively next time friend L.—no more "abouts."

I kept the cross of the Poland and Dominique, on Long Island. I had about 200, and consider them number one. Some years, I got 80 eggs each, and some years more, but never 100. I have not matured my poultry stock here yet.

T. B. MINER.

Clinton, Oneida Co., N. Y., May, 1851.

Foreign Agricultural News.

By the steamer Cambria, we are in receipt of our foreign journals to the 3d of May.

MARKETS.—*Ashes* are lower. *Cotton* has fallen again fully $\frac{1}{2}$ d. per lb. *Wheat, Flour, Corn, Provisions*, and in fact, most American products, were dull of sale, at slightly lower prices. *Wool* seems a little more promising.

Eggs in Winter.—An Irish correspondent in the London Agricultural Gazette, suggests that the best way of preserving eggs is, to have the pullets hatched in February that will begin to lay in December.

To Remove Moss from Trees.—Scrape the roughest of the moss from the trees, and then wash them with a mixture of soap suds, quicklime, green cow dung, and wood ashes.—*English Paper.*

Death of Professor Wahlenberg.—From Stockholm, is announced the death, at the age of 71, of the distinguished botanist and geologist, M. Goeran Wahlenberg, Professor at the University of Upsal.

Baked Potatoes.—It is computed that there are 60 tons of baked potatoes sold in the streets of London every week during the season, namely, from September till the beginning of April. The average takings of each vendor, is 6s. a day, and the receipts of the whole number throughout the season, are supposed to be £14,000.—*Cornwall Gazette.*

Boiling Potatoes.—The correspondent of the London Times, says: "The following method of dressing potatoes will be found of great use at this season of the year, when skins are tough and potatoes are watery. Score the skin of the potato with a knife, lengthwise and across, quite around, and then boil the potato in plenty of water and salt, with the skin on. The skin readily cracks when it is scored, and lets out the moisture, which otherwise renders the potato soapy and wet. The improvement to bad potatoes by this method of boiling them is very great; and all who have tried it find a great advantage in it, now that good potatoes are very difficult to be obtained.

Effect of Seaweed upon Orchard Trees, Applied as a Top-Dressing around the Roots.—Early in February of last year, I put in 150 high standards, including nearly every variety of apple, pear, plum, and cherry; also mulberry and walnut; the trees being generally six or eight years old. In the summer, most of them bore a little fruit; they were dressed as above, with seaweed, (of which there is abundance on my shore,) contrary to the advice of all around me; and, notwithstanding the fruit borne, it is a fair subject of inquiry, whether seaweed may be beneficial or otherwise to fruit trees.—*Gardeners' Chronicle.*

Comparative Value of Dung Heaps.—The dung heap, will, under the careless system, more rapidly diminish in bulk than in value, so that a load of it unrotted is not worth much more than half a load of the well-rotted manure; while the whole bulk of the heap after rotting in this way, may be worth, perhaps, two

thirds or three fourths of the whole bulk in its original state. When carefully prepared, the whole heap is worth as much as in its original state, indeed, more, the labor spent upon it not being lost; and as the bulk of the heap does diminish somewhat, the value of a given bulk increases in the same proportion.—*Agricultural Gazette.*

Poultry Remedy.—About six weeks ago, one of my hens became ill, and lost the use of one of its legs. I was told over laying was the cause of the malady, and was recommended to give her a few peppercorns, and a little bread soaked in ale, which was forced down her throat. In a few hours, the bird was walking about the yard; however, in a couple of days, she had a relapse, when the same dose was administered, and she was separated from her companions for 48 hours, when she quite recovered, and has had no return of the complaint, and produces her fair number of eggs per week. This may be a useful hint to amateurs, as I was informed by a poultry fancier of some experience that my hen would die.—*Ibid.*

Adulteration of Condiments.—It appears that pepper, mustard, arrowroot, &c., are not the only articles deteriorated by dishonest tradesmen and dealers. A report issued by the Pharmaceutical Society, describes an ingenious, but unwarrantable system of adulterating isinglass, an article extensively used for fining purposes, and for preparing the luxuries of the wealthy classes. Russian isinglass is the air bladder of the sturgeon, dried, rolled into thin sheets, and cut into very fine shreds. The system of adulteration detected, consists in rolling out common gelatine in a similar manner, and placing one sheet of the spurious matter, between two of isinglass. After cutting, the deception is very difficult of detection, but it may be marked by a comparison with the really genuine specimen, or by the disagreeable gluey flavor of the adulterated article when dissolved in boiling hot water, and tasted without sweetening.—*Ibid.*

Effects of Water on Metallic Pipes.—Attention has of late years been directed to the corrosion of tanks, and hot-water pipes, by particular kinds of water; these effects are sometimes very remarkable, and the cause of them is not always quite evident. When very pure water is kept in leaden tanks, or is allowed to remain in leaden pipes, it invariably corrodes them, the lead in time becoming honey combed and useless, whilst the water acquires a slight impregnation of lead, sufficient to render it decidedly unwholesome, if not absolutely poisonous. On the other hand, when water contains a considerable quantity of saline or earthy impurity, though it then does not act upon lead, it often corrodes iron pipes with great rapidity; this sometimes is traced to the presence of a large quantity of carbonic acid and air dissolved in the water, and sometimes is caused by the salts themselves; it is also frequently caused by the presence of two metals, as where iron pipes are joined by lead, in which case a galvanic action is established, which increases the corrosion of the one metal.—*Ibid.*

Editors' Table.

SOLOMON ROBINSON is now, and probably will be for some time, in New York, where he will be happy to see his southern friends.

PERUVIAN GUANO—A FULL SUPPLY.—We are happy to announce the arrival of several cargoes of Peruvian guano, just before putting this number of our paper to press. This removes all apprehension of a *short supply*, or chance of speculators creating a panic to advance the price. A. B. Allen & Co., 189 Water street, are now prepared to deliver lots of 50 tons or more from the ships while discharging, at \$48 the long ton. After storing, \$1 per ton is added to cover expenses. Smaller quantities are a trifle higher, according to the quantity ordered.

SHORTHORN BULL CALVES.—For advertisement of some superior calves of this breed, see page 196. They are the get of the superb imported bull Exeter, of the Princess tribe of shorthorns, and their dams are first-rate milkers, giving from 24 to 30 quarts per day. Their colors vary from strawberry roan to nearly deep red. We do not know of a better opportunity to purchase, for any one wishing to obtain a first-rate dairy-stock bull of fine quality.

THE OHIO AGRICULTURIST is a new monthly of 32 pages octavo, at one dollar a year, recently commenced at Tiffin, Ohio. It is edited and published by Dr. Sprague, assisted by Dr. J. C. Emery. The work is neatly got up and well edited. We welcome it as another evidence of the growing importance and improvement in agriculture among the people of the fertile west, and trust it will receive a good support from them.

MR. A. SHERMAN, our travelling agent, who has recently returned from a tour south, will revisit several of the counties in Virginia on the east side of the Blue Ridge, and in the Upper James-River Valley, early this month, for the purpose of making a more extensive acquaintance with the enterprising planters of that region.

Mr. Sherman expresses his grateful appreciation of the many tokens of kindness manifested towards him during his late visit south, and wishes to make the contemplated tour a mutual benefit to those whom he visits and to our Agricultural Warehouse, by supplying those who want, with guano, at price that will warrant the purchase in New York; also, by supplying the increasing demand for our horse powers, threshers, fanning mills; &c., which are admitted to be superior to any others now in use! He will spend the months of June and July, on the east side of the Blue Ridge, and August and September on the west side, visiting the different places of public resort, where he hopes to cultivate a still more extended acquaintance among the hospitable planters of Virginia.

PROFITABLE FARMING.—Agriculture would seem to be more profitable employment than gold digging at the present time in California. A Mr. Horner, from New Jersey, who has a farm at San José, about 40 miles

from San Francisco, is stated, by a correspondent of the Journal of Commerce, to have planted, during the last season, about 130 acres of potatoes, which yielded him a crop of 35,100 bushels, averaging 50 lbs. [?] to the bushel, and 270 bushels to the acre. The crop will average about 10 cents per pound, or the enormous sum of \$175,000; or, what is the same thing, the whole yield of 150 acres was 35,000 bushels, and sold at five dollars per bushel. To sum up all, we find the product of this farm of less than 150 acres was as follows:—potatoes, \$175,000; onions, \$16,000; cabbages, \$16,000; tomatoes, \$6,250; pumpkins, \$4,800; total product, \$218,050. Almost incredible.

LARGE CORN.—A Boonville paper says that a few days ago our attention was directed to some corn, the produce of Mr. Oglesby's farm. The ears were the largest we have seen, and we were prompted to weigh and measure some of them. Twelve ears which we selected, weighed 17 lbs. 12 oz. Seventeen ears, extended in a line, measured one rod and nineteen inches, which is an average of a fraction over thirteen inches each. The corn of 24 ears, shelled, measured half a bushel.

The crop, Mr. Oglesby states, was planted late; and checked in its growth by the drought in the summer, and was inferior in size and weight to some which he raised the year previous.

GREAT SALE OF SHORTHORN CATTLE.—We beg to refer our readers to page 196 of this number, for an advertisement of the sale of Mr. George Vail's stock of shorthorns, at Troy, on the 26th of this month; and at page 198, for that of Mr. L. G. Morris, at Mount Fordham, on the 24th of this month. Catalogues of the respective herds can be had on application to these gentlemen or to us.

Several of the animals in Mr. Vail's herd are celebrated milkers and butter makers, and all are well known for their early maturity and quick fattening propensities. Most of them have a cross of the celebrated Duchess tribe of shorthorns.

Mr. Morris' stock is mostly of a mixed character, of which shorthorn blood predominates. He has bred these with reference to their milking properties, and has eminently succeeded in this point. He has some Herd-Book animals also for sale.

There never was a more favorable time than the present, for the farmers of the United States to embark in the improvement of stock. The country is growing rich with great rapidity, and it has now the ability to pay for such things. Conducted with common prudence and sagacity, the breeding of fine stock, hereafter, is likely to be profitable; and those cannot but do well who embark in it at present low prices. Besides, the advantage to the farmer and dairyman in possessing an improved stock, is very great to them, individually. We hope they will generally attend these sales; even if they do not purchase, their presence will assist in giving countenance to the enterprise of the gentlemen who are so laudably attempting to improve the stock of the country.

Review of the Market.

PRICES CURRENT IN NEW YORK, MAY 17, 1851.

ASHES, Pot,.....	100 lbs.	\$4.75	@	\$4.81
Pearl,.....	do.	5.56	"	5.62
BALE ROPE,.....	lb.	9	"	11
BARK, Quercitron,.....	ton.	30.00	"	33.00
BEANS, White,.....	bushel.	75	"	1.50
BEE-WAX, American, Yellow,.....	lb.	20	"	27
BOLT ROPE,.....	"	11	"	12
BONES, Ground,.....	bushel.	45	"	55
BRISTLES, American,.....	lb.	25	"	65
BUTTER, Table,.....	"	15	"	25
Shipping,.....	"	9	"	15
CANDLES, Mould, Tallow,.....	"	10	"	13
Sperm,.....	"	25	"	50
Stearine,.....	"	25	"	30
CHEESE,.....	"	5	"	10
COAL, Anthracite,.....	2,000 lbs.	4.50	"	5.25
CORDAGE, American,.....	lb.	11	"	13
COTTON,.....	"	8	"	13
COTTON BAGGING, Am. hemp,.....	yard.	15	"	16
FEATHERS,.....	lb.	27	"	42
FLAX, American,.....	"	8	"	9
FLOUR, Sour,.....	bbl.	3.00	"	3.50
Ordinary,.....	"	3.50	"	5.00
Fancy,.....	"	5.25	"	6.25
Buckwheat,.....	"	"	"	"
Rye,.....	"	3.37	"	3.50
GRAIN—Wheat, Western,.....	bushel.	95	"	1.15
" Red and Mixed,.....	"	90	"	1.00
Rye,.....	"	73	"	75
Corn, Southern,.....	"	58	"	61
" Northern,.....	"	58	"	60
Barley,.....	"	1.00	"	1.13
Oats,.....	"	45	"	50
GUANO, Peruvian,.....	2,000 lbs.	47.50	"	50.00
Patagonian,.....	do.	"	"	40.00
HAY, in Bales,.....	100 lbs.	58	"	63
HEMP, Russia, Clean,.....	ton.	225.00	"	230.00
American, Water-rotted,.....	"	160.00	"	200.00
" Dew-rotted,.....	"	140.00	"	175.00
HIDES, Southern, Dry,.....	"	10	"	11½
HOPS,.....	lb.	30	"	45
HORNS,.....	100	2.00	"	10.00
LEAD, Pig,.....	100 lbs.	4.75	"	5.00
Pipes for Pumps, &c.,.....	lb.	5	"	7
LARD,.....	lb.	8	"	9½
MEAL, Corn,.....	bbl.	3.03	"	3.37
MOLASSES, New-Orleans,.....	gallon.	30	"	33
MUSTARD, American,.....	lb.	7½	"	9
NAVAL STORES—Tar,.....	bbl.	1.75	"	2.00
Pitch,.....	"	1.25	"	1.75
Rosin,.....	"	1.20	"	1.35
Turpentine,.....	"	2.44	"	3.00
Spirits of Turpentine,.....	gallon.	35	"	38
OIL, Linseed, American,.....	"	75	"	80
Castor,.....	"	1.05	"	1.15
Lard,.....	"	75	"	80
OIL CAKE,.....	100 lbs.	1.25	"	1.50
PEAS, Field,.....	bushel.	75	"	1.50
Black-eyed,.....	2	1.75	"	2.00
PLASTER OF PARIS,.....	ton.	2.50	"	3.25
Ground, in Barrels of 300 lbs.	"	1.12	"	1.25
PROVISIONS—Beef, Mess,.....	bbl.	8.00	"	11.50
" Prime,.....	"	4.00	"	6.50
" Smoked,.....	lb.	6	"	12
" Rounds, in Pickle.....	"	4	"	6
Pork, Mess,.....	bbl.	12.00	"	15.25
" Prime,.....	"	9.00	"	13.50
Bacon Sides, Smoked,.....	"	3	"	4½
" in Pickle,.....	"	3	"	4
Hams, Smoked,.....	"	5	"	9
" Pickled,.....	"	4	"	7
Shoulders, Smoked,.....	"	5	"	6
" Pickled,.....	"	5	"	5
RICE,.....	100 lbs.	3.00	"	3.63
SALT,.....	sack.	1.00	"	1.70
Common,.....	bushel.	8	"	35
SEEDS—Clover,.....	lb.	8	"	9½
Timothy,.....	bushel.	2.00	"	4.00
Flax, Rough,.....	"	1.60	"	1.70
SODA, Ash, (80 per cent. soda),.....	lb.	3	"	—
Sulphate Soda, Ground,.....	"	1	"	—
SUGAR, New-Orleans,.....	"	4	"	8
SUMACH, American,.....	ton.	35.00	"	37.00
TALLOW,.....	lb.	7	"	8
TOBACCO,.....	"	5	"	15
Eastern, Seed-leaf,.....	"	15	"	20
Florida Wrappers,.....	"	15	"	60
WHISKEY, American,.....	gallon.	23	"	25
WOOLS, Saxony,.....	lb.	50	"	60
Merino,.....	"	40	"	50
Grade Merino,.....	"	30	"	40
Common,.....	"	20	"	30

REMARKS.—Since our last, Cotton, Wheat, Flour, Corn, and Barley have fallen; while Pork, especially mess, has risen.

The Weather continues cold, with abundance of rain, and partial frosts. We hear of more or less injury done to the growing crops in particular districts, but nothing as yet generally disastrous to record. Grass promises a large yield, and is very forward.

TO CORRESPONDENTS.—Communications have been received from T. B. Miner, T. L. P., W. B. W., and A. Greene.

Prices of Blake's Fire-Proof Paint.—Paris T. Carlisle, Frederica, Del.—Put up dry in barrels of 300 lbs, \$4 per 100 lbs. Ground in linseed oil, in kegs of 100 lbs., \$6.75. No lead is required, except to change color.

BERKSHIRE PIGS FOR SALE.—I offer for sale three pure-blooded Berkshire boar pigs, eight weeks old, from my imported sow and boar, described at page 43 of the Agriculturist, and warranted. Also a few half breeds from a very fine large sow, which I can highly recommend as something superior. Direct, (post paid,) 176½ Bowery, N. Y.
ju lt C. W. SIMMONS, Yonkers.

LIGHTNING RODS, constructed on scientific principles, and if properly put up, will render churches and other buildings secure from the electric shock.
my A. B. ALLEN & Co., 189 and 191 Water st.

SHORTHORN BULL CALVES.—For sale, two very superior thoroughbred shorthorn bull calves, got by the superb imported bull Exeter, out of two of Mr. J. P. Sheafe's great milking cows. Exeter is of the Princess tribe of shorthorns, and was bred by Mr. Stephenson, of Durham, England, and imported by Mr. Sheafe. The dams of these bull calves are celebrated milkers. For a particular account of Exeter and these cows, see the last volume of the Agriculturist, and page 151 of the present volume. Mr. Jackson, of Astoria, has a young bull, dropped last August, got by Exeter, out of one of Mr. Sheafe's cows, whose superior we do not believe was ever produced in the United States; and these calves now advertised for sale, we think equally promising.
ju lt A. B. ALLEN & Co., 189 and 191 Water st., N. Y.

GREAT SALE OF SUPERIOR, THOROUGH-BRED Shorthorn Cattle.—The subscriber having more stock than can well be sustained on his farm, will offer at public auction, about 30 head of his Improved Shorthorn Cattle, consisting of bulls, cows, heifers, and heifer and bull calves, on the 26th day of June next, at his farm, 2½ miles from this city. It is known to breeders of improved stock in this country and in Canada, that the proprietor of this herd, during the past 12 years, has, through the medium of importation from England, and selections from the best herds in this country, spared no expense to rear a herd of cattle from which superior animals could be safely drawn, for the improvement and crosses of other herds. His importations have been derived from that eminent breeder, the late Thomas Bates, Esq., of Kirkleavington, Yorkshire, England, which herd, it is well known, has recently been disposed of at public sale, by his administrators, and dispersed in many hands, and can no longer be resorted to, as a whole, for improvement. The announcement of this sale created great interest in the minds of all shorthorn breeders in England, who seemed desirous to secure one or more of these animals to mingle with the blood of their herds. At the day of sale, there was found assembled, the largest audience ever before witnessed upon a similar occasion, numbering, as it was said, from 4,000 to 5,000 persons. Among them were the best breeders in England, and several from other countries. Some of the animals brought prices which seemed incredible to many.

In the herd now offered for sale, will be included the imported bull Duke of Wellington, and the premium bull Meteor. These are Bates' bulls, and their reputation, as stock getters, are too well known to need comment. I am, however, authorised, by Lewis F. Allen, Esq., of Black Rock, one of the most prominent breeders in this country, and who has had ample means for forming a judgment, "that in no instance, to his knowledge, has these two bulls been bred to shorthorn cows of other herds, previously imported into the United States, but what the produce were superior, in general qualities, to such herds."

Most of the stock which is now offered for sale has been bred from these two bulls. The proprietor having a young bull more remotely connected with the portion of the herd, which he retains, being about 14 in number, he can part with these two valuable bulls. There will be in the stock offered for sale six young bulls, from eight months to about two years old, in addition to the two named above. The remainder of the stock will be composed of cows, most of them possessing extraordinary milking qualities, heifer, and heifer calves, all fine in symmetry and good handlers.

It is believed that no herd of shorthorns has ever been offered for sale in this country exhibiting more of the valuable combination of qualities which contribute to make up perfect animals.

A catalogue containing the pedigrees of these animals will be ready for delivery at an early period, in which the terms of sale will be fully stated. A credit will be given from 6 to 18 months. Gentlemen are invited to examine the herd at their convenience.
mar GEO. VAIL, Troy, N. Y.

1000 Men Wanted to Circulate the following Useful

BOOKS FOR FARMERS,

And all who are interested in Agriculture, Horticulture, &c., &c.

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Takes pleasure in announcing to the Farmers, Gardeners, and Horticulturists of the United States that he has added a large number of books to his list of publications, and is prepared to offer great inducements to Travelling Agents; and here let it be distinctly understood that he does business on the cash plan, it will be necessary for persons who apply for an agency to have a capital of from \$25 to \$100 to start with, and with such an assortment, adapted to the actual wants of the people, no person, with the right kind of energy can fail to make good wages. In fact, it is a rare chance for agents to make money. Address, (post paid.)

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Randall's Sheep Husbandry.—Containing a Treatise on the Acclimation of Sheep in the South.

Also, a complete Manual of Breeding, Summer and Winter Management, and of the Treatment of Diseases, with 70 Illustrations. By Henry S. Randall, Esq. Price \$1.25 bound in cloth. Mail edition \$1.

Fessenden's Complete Farmer and American Gardener, containing near 700 pages. It is handsomely bound in cloth, gilt. Price \$1.25. Mail edition, in paper covers, only \$1. This is one of the cheapest books that has been offered to the farmers of the United States.

Johnston's Agricultural Chemistry.—Price, in cloth \$1.25. Mail edition, \$1. This work is the most complete Manual of Chemistry for farmers ever published. It contains over 700 duodecimo pages.

Miner's American Bee Keeper's Manual, price \$1, cloth—75 cents in paper covers; being a Practical Treatise on the History and Domestic Economy of the Honey Bee, embracing a full illustration of the whole subject, with the most approved methods of managing this insect through every branch of its culture, the result of many years' experience. Illustrated with three hundred accurate figures.

Browne's American Poultry Yard.—The American Poultry Yard; comprising the Origin, History, and Description of the different breeds of Domestic Poultry, with complete directions for their Breeding, Crossing, Rearing, Fattening, and Preparation for Market; including specific directions for Caponising Fowls, and for the treatment of the principal diseases to which they are subject; drawn from authentic sources and personal observation. Illustrated with numerous Engravings. By D. J. Browne, author of the *Sylvia Americana*, with an Appendix by Samuel Allen. Price \$1. Mail edition 75 cents.

Youatt on the Breeds and Management of Sheep, with remarks on their Management in the United States. With Illustrations. Price 75 cents.

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Treatise on the Cultivation of the Grape Vine on Open Walls, with a descriptive account of an improved method of Planting and Managing the Roots of Grape Vines. By Clement Hoare. To which is added an Appendix, containing Remarks on the Culture of the Grape Vine in the United States. Price, in cloth, 50 cts., paper 37 cts.

Lectures on the General Relations which Science bears to Practical Agriculture, delivered before the New-York State Agricultural Society. By James F. W. Johnston. With Notes by an American Farmer. Price, in cloth, 75 cts., mail edition, paper, 50 cts.

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Youatt & Martin's Great Work on Cattle.—Being a treatise of their Breeds, Management, and Disease, comprising a full and complete history of the different Races, their Origin, Breeding, and Merits; their capacity for Beef and Milk; the nature and treatment of their diseases, the whole forming a complete guide for the farmer, amateur, and the veterinary surgeon, with 100 splendid illustrations. Edited by Ambrose Stevens, Esq. Price \$1.25.

The American Architect.—The cheapest Architectural work ever published in the United States. Carpenters and others, designing to build, would find this publication to be a valuable aid. Country builders, especially, would derive substantial assistance from the Details and fully-patronised Specifications. It consists of Original Designs of Country Dwellings. Each number contains a Perspective View, two Elevations, two Plans, a Plate of Details, and fully-described Carpenter's and Mason's Specifications. Now complete in 24 numbers, at 25 cts. each, or \$5 for the 24 numbers. \$6 bound in two volumes.

Buist's Family Kitchen Gardener, containing plain and accurate descriptions of all the different species and varieties of culinary vegetables, with their Botanical, English, French and German names, alphabetically arranged, and the best mode of cultivating them in the garden or under glass; with a description of implements, and medicinal herbs in general use.

Also, descriptions and characters of the most select fruits, their management, propagation, &c., illustrated with 25 engravings. By Robert Buist, author of the *American Flower-Garden Directory*, *Rose Manual*, &c. Price 75 cents. Mail edition 50 cents. Just published by C. M. SAXTON, 152 Fulton st., N. Y.

ENDLESS-CHAIN PUMPS, OR WATER

Elevators.—These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.

A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults of privies, where the contents are in a semi-liquid state.

A. B. ALLEN & Co., 180 and 191, Water st., N. Y.

DOMESTIC ANIMALS AT AUCTION.—The

postponed yearly sale of full-bred shorthorns and improved dairy stock, consisting of about 50 head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved dairy stock, which is composed of the finest shorthorns, with a slight cross of Amsterdam Dutch, which, some writers say, was part of the original ingredient which composed the improved shorthorns.

I am now breeding the shorthorns, Devons, and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The cow which won the first prize as a milker, at the American Institute last year, was bred by me, and composed of the above-alluded-to dairy stock. Several of the bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All cows and heifers old enough, will be warranted in calf at the day of sale, by my imported bull "Lord Eryholme," or my celebrated bull "Lamartine."

I own two thorough-bred Devon bulls; one, the celebrated old Major; the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold, which, I have not as yet determined.

A full catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk sows, in pig to my imported boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 Southdown ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported buck "Babraham." Some of my buck lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain stock from my previous herd, but will also enable persons to procure calves from my imported bull, lambs from my imported ram, and pigs from my imported boar, all of which animals were recently selected by me in person, when in England.

The mode of warranting the cows and heifers in calf, is this: In case they prove not to be so, it shall be optional with the purchaser, on his certificate of that fact, either to receive from me \$25, or to send the cow to my farm, and I will keep her the proper time, (free of expense,) to have her got in calf to either of my bulls, which he shall choose. I will give \$25 for any heifer calf from any of the cows or heifers sold at that sale, delivered on my farm, at two weeks old.

Stock purchased to be sent to a distance, will be delivered on shipboard or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the south, in a climate to which it would not be well that stock should be transported, at that hot season of the year, may let such animals as they may purchase, remain, with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post, Office please pre-pay, and I will pre-pay their answers, and also a catalogue if required. Catalogues will be to be had at all the principal Agricultural Warehouses, and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time, will find my superintendent, Mr. Wilkinson, to give them the desired information when I am not at home.

Dated this 4th day of March, 1851, at Mount Fordham, Westchester county, eight miles from the city of New York, by Harlem Railroad.

L. G. MORRIS.

P. S. I decline selling any stock by private sale, so as to offer the public all the animals I have to part with, without having any previously-selected from the herd, and all animals offered will be positively sold.

L. G. M.

apr 3t

A. G. BAGLEY & Co., manufacturers of gold pens, gold and silver pen and pencil cases, ivory and tortoise-shell holders, and patentees of the celebrated extension cases, No. 189 Broadway, New York.

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For the Cure of

COUGHS, COLDS, HOARSENESS, BRONCHITIS, CROUP, ASTHMA, WHOOPING COUGH AND CONSUMPTION.

In offering to the community this justly-celebrated remedy for diseases of the throat and lungs, it is not our wish to trifle with the lives or health of the afflicted, but frankly lay before them the opinions of distinguished men, and some of the evidences of its success, from which they can judge for themselves. We sincerely pledge ourselves to make no wild assertions or false statements of its efficacy, nor will we hold out any hope to suffering humanity which facts will not warrant.

Many proofs are here given, and we solicit an inquiry from the public into all we publish, feeling assured they will find them perfectly reliable, and the medicine worthy of their best confidence and patronage.

From the distinguished Professor of Chemistry and Materia Medica, Bowdoin College.—Dear Sir: I delayed answering the receipt of your preparation, until I had an opportunity of witnessing its effects in my own family, or in the families of my friends. This I have now done with a high degree of satisfaction, in cases both of adults and children. I have found it, as its ingredients show, a powerful remedy for colds, coughs, and pulmonary diseases.

PARKER CLEVELAND, M. D.

Brunswick, Maine, Feb. 5th, 1847.

From an Overseer in the Hamilton Mills, in this City.—Dr. J. C. Ayer: I have been cured of the worst cough I ever had in my life, by your "Cherry Pectoral," and never fail, when I have opportunity, of recommending it to others.

Lowell, Aug. 10th, 1849.

S. D. EMERSON.

Read the following, and see if this medicine is worth a trial. This patient had become very feeble, and the effect of the medicine was unmistakably distinct:—

United States Hotel, Saratoga Springs, July 5th, 1849.

Dr. J. C. Ayer—Sir: I have been afflicted with a painful affection of the lungs, and all the symptoms of settled consumption, for more than a year. I could find no medicine that would reach my case, until I commenced use of your "Cherry Pectoral," which gave me gradual relief, and I have been steadily gaining my strength till my health is well nigh restored.

While using your medicine, I had the gratification of curing with it, my reverend friend, Mr. Truman, of Sumpter District, who had been suspended from his pastoral duties by a severe attack of bronchitis. I have pleasure in certifying these facts to you, and am, sir,

Yours respectfully,

J. F. CALHOUN, of South Carolina.

Prepared and sold by James C. Ayer, practical chemist, Lowell, Mass., and sold by druggists generally.

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MORGAN HUNTER & MORGAN CHIEF.—

Morgan Hunter will stand the coming season, at the stable of S. A. Gilbert, in East Hamilton. Terms \$10, to insure. This fine horse is seven years old this spring—was bred in Springfield, Vt.; got by Gifford Morgan, dam by the same horse; thus possessing more of the blood of the Gifford Morgan, than any other horse now living. For portrait and description see page 193 of the current volume.

MORGAN CHIEF will be four years old on the 18th of this June. He is a very superior colt—was got by Gifford Morgan, dam by Green-Mountain Morgan. He will stand at the stable of H. R. Ackley, East Hamilton. Terms \$10, to insure. See Cultivator for 1849, page 67.

ACKLEY & GILBERT,

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East Hamilton, Madison Co., N. Y.

MORGAN HORSE, YOUNG GIFFORD.—

This splendid Colt will be kept at the stable of the subscriber the coming season, for a few mares only. Young Gifford will be three years old this June; was bred in Walpole, New Hampshire, by F. A. Wier; in color, chestnut—got by Gifford Morgan, dam by Sherman Morgan, thus possessing the blood of two of the best Morgan stallions on record. In color, form, and action, he closely resembles his illustrious sire. Terms \$10 to insure. For description, see Cultivator for 1849, page 67. Good pasturage furnished; accidents and escapes, at the risk of the owners.

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MORSE'S GREY.—This celebrated horse was awarded the first premium of \$20 at the great New-York State Fair in September, 1850, where he was exhibited with a large number of his colts, and was judged the best stock horse for all work in this country. Said horse has trotted his mile in two minutes and forty-six seconds. One of his colts took the first premium at the state fair at Saratoga Springs, owned by Mr. Milliman, of Washington County, N. Y., and all places where stock have been exhibited, they carried off the best premiums. He is a beautiful dapple grey, 15½ hands high, strongly and finely proportioned. This horse is a descendant of the diligence coach horses in Italy, and brought from there by Napoleon Bonaparte to France, and was then sold to a gentleman and brought to Quebec, and was there sold to a gentleman by the name of Mc Mill, of Washington County, N. Y. His dam was of the Messenger breed. Said horse was raised by Mr. J. Mills, of Argyle, Washington County, N. Y.

We challenge any horse in this state to show as fine stock as said horse. His colts are justly celebrated for speed, bottom, and good temper, are eagerly sought after in the market, and command prices varying from \$150 to \$500 and \$1,000. Terms, \$10 the season. Insurance to be agreed upon. Said horse will stand at the stable of James Rice, three miles north of the village of Lausburgh. All communications addressed to J. T. Grant, P. M., Junction, Rensselaer Co. N. Y., will receive prompt attention.

CALVIN MORSE.
J. T. GRANT.

may 2t

DESCRIPTION AND PRICES OF DRAINING TILES.—Tubular Tile, 3-inch size, \$14 per 1,000; 2½-inch size, \$12 per 1,000. Horse-Shoe Tile 3½-inch size, \$18 per 1,000; 4-inch size, \$16 per 1,000; 3½-inch size, \$14 per 1,000. Sole Tile, 4½-inch size, \$20 per 1,000; 3½-inch size, \$14 per 1,000. Drain Tile to correspond with the above description and prices will be manufactured by the subscribers as soon as the spring season will admit, and they invite farmers, gardeners, and all those requiring drains, to an examination of their tiles. They are 14 inches in length, durable and cheap. Orders from a distance with satisfactory reference, will receive prompt attention.

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mar 1t JOHN A. AVIRETT, Catharine Lake, Onslow Co., N. C.

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MACHINE SHOP AND FOUNDRY.—Connected with our Agricultural Warehouse and Seed Store, we have a large Machine Shop, with Steam Power and Foundry, where any Implement and Machine can be made to order, which is required for the Farm, Plantation, Garden, &c.

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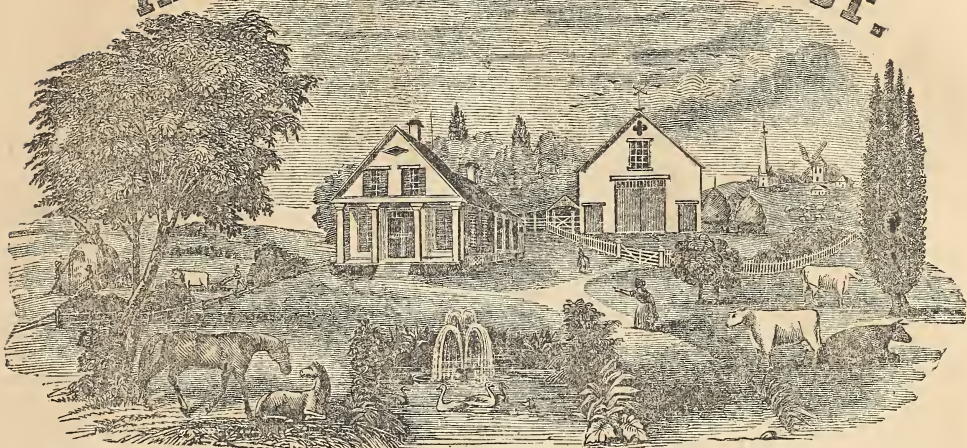
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A. B. ALLEN & CO.

AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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TERMS.

The *Agriculturist* is published on the first of every month and forwarded by mail to single subscribers for

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For general rates of postage, see first page of our June number.

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CARROTS AND PARSNIPS—SUBSTITUTES FOR POTATOES, AS FIELD CROPS.

CARROTS for light, and parsnips for heavy soils, are excellent substitutes for potatoes, where the land is deeply worked, rich, and finely pulverised. They are doubly advantageous, in affording a most excellent food for every variety of farm stock, and avoiding the risk consequent upon the tendency of potatoes to disease, within the last few seasons. There are few crops more certain than those of both carrots and parsnips; indeed, we scarcely know the instance of loss to either, from enemy or disease. Both are readily sown by a machine, which plants rapidly and economically, and with much more precision and accuracy than can be done by hand. There is a great saving to the farmer, also, over potatoes, in the expense of seed, for while 10 or 15 bushels of good seed potatoes, necessary for planting an acre, frequently costs a dollar per bushel, the expense for the seed of either the parsnip or carrot, for an equal planting, will seldom exceed as many shillings. The cultivation may be performed with the cultivator, harrow, and light double-moldboard plow, with the aid of some small weeding, while the plants are young, which can be done exclusively by children or females. As the planting should be always in drills, the lifting or harvesting is most readily done by running a small plow close to the roots and throwing the earth aside, when the long tap roots are easily removed by hand, or a pronged hook lately invented for this purpose.

Another important advantage may be mentioned. The carrot and parsnip are not only highly nutritious, but the former is a light, digestible food for all animals, and especially for the horse, which it benefits beyond an equal quantity of oats when fed in moderate quantity once a-day. There is a peculiar principle contained in it, in comparatively large proportions, which not only promotes the rapid digestion of its own substance, but greatly and most favorably stimulates the digestive organs in their action on all other food that may be taken into the stomach when daily fed with carrots. The effect of this peculiar principle, which has received the name of *pectin*, is not confined to its action when fed raw, either to the horse or pig, or the ruminating animals; but seems to be equally efficacious when prepared by boiling and steaming, and fed to the human race. Besides the healthfulness thereby secured, there is great economy in the use of carrots in large families, where potatoes and shillings are scarce; for though not always as highly relished as the potatoes, yet

they are exceedingly palatable and *toothsome*, when properly cooked, and especially when nicely sliced and boiled in a light, wholesome soup. Their uses for pies, and as constituents of bread, puddings, &c., are well known and properly appreciated by the initiated in the gastronomic art, where they not only serve the purposes of food, but afford a real delicacy for the more pampered palate.

Of the varieties of carrots usually cultivated, the long orange is the best of the table kinds for its yield. It is also of fine grain and excellent flavor. Next to this is the large Altringham, which is prolific but rather coarse, yet a good table root. The early horn is of quick growth, and a choice esculent for cooking, but is of diminutive growth. The white Belgian is by far the greatest yielder, and therefore best suited to a field crop where stock feeding alone is the object. It is not fit for the table; and is inferior to any of the other varieties in its nutritive properties, bushel for bushel, but probably much exceeds them in its aggregate value, acre for acre. It has the further advantages of being more easily harvested, in consequence of much of the root growing above the surface; and its appropriating a larger proportion of its constituents from the atmosphere, than the other varieties, thereby lessening its draught on the fertilizing matter existing in the soil.

We may mention as one of the advantages possessed by the parsnip, that, in addition to the large proportion of wholesome nutritive matters which it contains, and its general adaptation to the feeding of all stock, and more especially to milch cows and swine, it requires no harvesting in autumn, but is preserved more securely in the soil where grown, than elsewhere, when it is properly drained and not exposed to standing water on the surface. The parsnip is not, however, so well adapted for feeding to horses, as either the potato or carrot. Qualey attributes to its too free use by horses, epiphora, or weeping; and it has been asserted that it will, in some cases, produce blindness, an effect which is never assigned to its use, however profuse, when fed to swine or ruminating animals.

When the land has been properly prepared, the carrot affords one of the most certain and reliable crops. It is the experience of an English farmer, that, where they were grown for fourteen successive years on from five to ten acres, but two crops produced less than 500 bushels per acre, while the remaining twelve seasons, averaged from 500 to 1,200 bushels per

acre; and all these were grown on poor sands and gravels. We will add in conclusion, that on all such lands, the roller must be thoroughly used, to give sufficient compactness to the soil, to enable it to hold the fibres of the roots firmly and impart to them their requisite quota of nourishment.

If other root crops should be substituted for the potato, to the extent, at least, of providing succulent winter food for all the dumb things on the farm, the diminished quantity of potatoes, planted, would tend materially to lessen their liability to disease. By more judicious selections of fields, more frequent change of crops, more careful choice of seed, and greater painstaking in planting, the fearful malady, so long and so fatally prevalent in the potato, may not only be greatly mitigated, but with the aid of science in discovering some of its causes and abettors, this substitution may hereafter lead to its effectual eradication.

PORK—BACON—HAM.—No. 4.

THE difficulty of saving hams from decay or from fly blows is well known to consist principally in properly curing the knuckle, or superi- or extremity of the thigh bone; it will therefore be apparent that if such a difficulty exists in curing them, it must be greatly increased when the bulk of the ham remains attached to the side, or flitch. These operations being completed, the side is carried to another table, where the operator cuts off any straggling pieces of flesh, together with what may be considered superfluous on the shoulder. He is also provided with a sort of dull iron chisel, to which a cord is attached which passes over his neck, and with this chisel, he separates the scapula, or shoulder bone, from the muscles attached to it; this being completed, a small noose from another short cord, also placed over the neck of the operator, is now fastened to the narrow and joint end of the bone; in doing so, the workman has to bend his body, the cord being made short expressly for this purpose.

In resuming the upright position, he draws out the shoulder, or as it is commonly called, the blade bone; the fore arm, or knuckle, may be either left or taken out; it is usually left with the side; the last operation is sawing off the shank of the ham, which is done a few inches above the joint; the side is now fit for the curer. The rapidity with which all these operations is performed quite astonishes the spectator who has not previously seen a large establishment of this kind, several of which, in Ireland,

slaughter from 800 to 1,000 large hogs per week during the season, namely, from October to April. The head is sometimes cured by separating the lower from the upper portion, the lower part forming what is called the "chap." The more usual way is to split the head into two lateral divisions and throw them into a strong pickle, the same as is used for forming pickled pork. The above-described mode is that usually adopted in the west of England, and also in those parts of Ireland where bacon is prepared for the London market in the west-of-England fashion. The York method differs from the west-of-England mode, in having the ham detached from the flitch, and also in not cutting out the griskin, leaving the whole of the ribs attached to the side, only separating the back bone, as previously described. The ham is cut either short or long, according to taste; if cut long, the whole of the pelvis, or haunch bone, is cut out in connection with the thigh bone and ham. The Westphalian ham is an instance of this method, and is the best mode for the seller, as he gets the price of ham for a large portion which would otherwise form a sort of offal, or make part of the flitch, and so only obtain the price of bacon. This form of ham is the worst for the consumer, as the lower end contains a great quantity of bone, and is only fit for boiling; it has also its disadvantages with the curer as it disfigures the flitch very much, leaving a long narrow slip at the ham end, which can only be used for melting down. On the whole, therefore, the method of cutting the ham short is the best; this is done by sawing the pelvis in about the middle and cutting the ham in a circular manner from that point. It is not customary with small pigs to cut any part of the ribs; but with large ones, it is requisite to cut a portion out of the fore part, and also to draw out the blade bone as described in the west-of-England mode. With small pigs, such as the improved Essex, this may be omitted when they are only from nine to twelve months old, and having been previously well fed, as the curing of bacon depends greatly on the latter-named circumstances; this, together with the fact that small bacon and hams usually obtain the best price, other matters, as quality of meat, &c., being equal, is a strong argument in favor of the smaller description of pigs in reference to the larger breeds; also, as here shown, the whole of the carcass can be converted into marketable ham and bacon, without any deduction for offal of much consequence.

I omitted to state that prior to preparing the

carcass for bacon, the whole of the omentum, or caul, ought to be taken out; this is, however, so obvious, that the omission is not very material. It is by no means an uncommon practice with bacon curers to render down the caul with the lard; if the caul is taken out carefully and well washed, this may be done without detriment to the lard. Lard is rendered down by being first cut up into pieces, and placed in a boiler along with a little water, which as it melts, is strained off and poured into bladders. Great attention is requisite in rendering lard in order to maintain the proper degree of heat, yet, at the same time, to prevent burning; bladdering lard also requires some dexterity. When all the lard is strained off, the remainder is subjected to pressure in a press appropriated to the purpose, by which means very little fat is left; what is left in the press is called "greaves," and is sold in cakes to feed dogs, in some instances to feed hogs; also to the Prussian-blue makers. Although the term "offal" has been several times used, the meat in several instances, though so called, is in fact the finest part of the pig; for instance, the griskin in Ireland, is sold together with the piece cut out of the breast and the haunch bone and meat appended thereto, are all called offal, notwithstanding which term, the griskin is undoubtedly the finest part of the pig.—*Jour. Royal Ag. Soc.*

MEADOW LANDS IN NORTH CAROLINA.

THERE has been very little attention paid to meadows in this part of the state; and for the want of proper management, those who commenced them have made poor progress. From what has fallen under my observation, I think they may be greatly improved by cultivating herd's grass, or red top.

Two of my neighbors prepared meadow land several years ago, and sowed herd's grass or red top seed, which, for a few years, produced fine crops; but the third year, they began to fail, and as is usual in these parts, instead of trying to improve them, they were neglected. Hogs have been permitted to run upon them and root them up, and from appearance, they were entirely ruined; but, to their surprise, the next year, as far as they were rooted up by the hogs, the grass crop was improved at least 50 per cent. above any former crop.

Another of my neighbors prepared a piece of land favorable for the purpose, and sowed it with herd's grass seed, which did well a few years, and then began to decline; and finally, it was plowed up and tended in corn, and every

effort made to destroy the grass. In the fall, it was sowed in wheat, and at harvest, the herd's grass, in many places, entirely overrun the wheat. It was again tended in corn, and sowed in oats, and the herd's grass again got the better of the oat crop. In the fall of 1849, it was again put in wheat, but the grass again got the better of it, and a good crop was made of the greater part of it. The owner is now encouraged to turn it into a meadow again.

From these observations, I am convinced that, at least, in this part of the country, cultivation of meadows is necessary, and would be beneficial.

GEORGE LUTHER.

Martha's Vineyard, N. C., March, 1851.

UTILITY OF THE STUDY OF ENTOMOLOGY TO THE FARMER.

AMONG the insect tribes are found the greatest benefactors, and the most dreaded enemies of man; and hence arises a necessity of studying their habits and instincts and the circumstances that favor or retard their increase, and their partialities and antipathies, that we may be able to derive from them the greatest benefit, or receive the least injury. It is not from individuals of the insect races that we have to hope or fear, but from the congregated myriads that are developed in seasons and localities favorable to their existence, and which are often associated by instinct, into communities bearing in their general relations an analogy to human society, that they become an efficient agency of good or evil to the husbandman. Hence, the importance of studying them in their individual organisation and associated habits, that we may learn the laws that govern their increase and distribution. Different species have an important relation to each other, and this leads to the necessity of studying the characters of those more minute and seemingly unimportant classes, that on a superficial examination would appear to have the least possible connection with human affairs.

Viewed in this light, entomology assumes an importance second to none of the sciences; and, (as the zeal of the votaries sufficiently proves,) it is not wanting in those attractive features that render study agreeable. The poet and the moralist have ever found in insect life, sufficient materials to adorn and instruct. But our present purpose will not allow us to pursue the beautiful analogies that might be traced, and the lessons that might be taught through these agencies. The purposes of science are higher and nobler than those of tracing curious and fanciful analogies. An investigation into the struc-

ture and characteristic peculiarities of the various genera and species, the changes that attend their progressive development, their habits, food, and the time, season, and manner of depositing their ova, with the circumstances that favor or retard their appearance, the classification and system of naming them, that they may be designated with precision and recognised with facility by others, and an inquiry into the extent to which they may be controlled by human agencies, constitute the proper objects of the student's attention. In no other manner can we obtain a knowledge of insects that may be available to the farmer and the gardener, the fruit culturist and the florist, the ship builder and the housekeeper, who severally feel the effects of their ravages, and appreciate the value of preventives against them.

With the exception of the honey bee and the silk worm, the whole of the insect races are usually regarded by the farmer, as his enemies; yet, if carefully observed, many species would be found his benefactors. In sultry seasons and hot climates, they act as scavengers to remove decaying and putrescent animal matter that would otherwise act as an exciting cause of pestilence and promote the spread of disease. It is difficult to penetrate the thickets of tropical swamps and marshes from the swarms of venomous insects that assail the adventurer; and even in temperate climates, the myriads of mosquitoes that haunt the borders of swamps and streams, render a sojourn so unpleasant that there is less danger of incurring disease from exposure to the pestilential miasms peculiar to these localities. The physician, the painter, and the dyer are severally indebted to the insect tribes, for the blistering fly, lac, cochineal, and nut galls, each in their kind, indispensable; and we must also place to the credit of insects, the first ideas they have furnished of many valuable discoveries in the arts. The aeronaut and the diver have each their prototype in the spider, and if the fiction of the ancients is to be credited, man learned to spin from the worm; to build from the bee, and to husband his resources in summer to supply his wants in winter, from the ant.

STEAMING POTATOES.—The secret of steaming potatoes is very little understood, and rarely carried into full effect, although it is indispensable to the nutritious development of the vegetable. The whole mystery consists in suffering the steam to escape, and at the same time keeping the potatoes hot.

POULTRY RAISING.

RAISING poultry is not a profitable business, at least, on Long Island, where we have a ready market for our grain at our doors. Every chicken from the time it is out of the shell until it is fit for market, consumes about 25 cents' worth of food, (more than we generally get for them,) besides the time spent in taking care of them, to say nothing of the loss of the hen. From six to ten weeks, poultry kept for their eggs is profitable, if well attended to, and not in too large numbers together.

Many farmers take little or no care of their poultry during the winter months, leaving them to glean whatever they can find about the barn yard, and of course, they get very few eggs. I get quite or nearly as much profit from my poultry in winter, as I do in summer; but I do not get so many eggs; yet, they bring from six to eight cents more per dozen.

I have tried several large kinds of fowls, but they would not answer for laying. Small birds are best for eggs. The best layers are a cross with the black-Poland top knots and the Creoles. Although the Polands are called everlasting layers, they do not lay so well, nor so early as a cross with some small breeds. The Dominiques, for instance, is a very good sort to cross with.

In the March number, (1850,) of the Agriculturist, Mr. Miner tells us that the Polands will mix by sight. I have had them more or less for 20 years, and have never known them to mix, unless they run with other fowls. I believe pure breeds are scarcely to be had. They are frequently seen in the New-York Market, for sale, with yellow legs. Those are not pure.

In order for hens to lay in winter, they must have some kinds of meat as an offset for the myriads of insects that they get in summer. Scraps and offal of most any kind are good. Also, soft-shelled clams, which can be procured almost any time throughout the winter around our bays and harbors. I boil them and jam them up, shell and all. The hens eat them very greedily. Spring pullets, if kept well, will commence laying in November and continue through the winter.

H. B. ROGERS.

Huntington, Long Island, Feb., 1851.

TO SOFTEN HARD WATER.—A few ounces of soda will soften a hundred gallons of the hardest water. For washing, it possesses a marked superiority over pot or pearl ash, giving a delicate whiteness to the linen, without the slightest injury.—*Ex.*

SHORTHORN BULL SPLENDOR.

By omission for the want of space, the following remarks in regard to this fine bull, were not made up to accompany his portrait, in our May number, page 152. These remarks were written by Mr. D. H. Albertson, of Lima, Livingston County, N. Y.

Steers of Splendor's get, when broke, make good workers, are active, and full of mettle, yet very kind and gentle; usually attain large size, and are of fine proportion, and always sell for large prices. I have known several pair sold for \$200, when four years old. I sold a lot of steers last fall, two years old, for \$50 per head.

So far as my knowledge extends, cows of Splendor's get prove excellent milkers, and are much sought after. I now own one, which has given 70 pounds of milk per day; and this, I think, she would do for weeks together, in good feed. His get, when three years old, (often at two,) fatten remarkably well, making more pounds of meat, and of course, paying better for food consumed, than any other stock in this section.

It is a well-settled opinion, among the breeders of good stock, that Splendor is the best getter ever introduced into this section of western New York; which opinion is fully proved, by the avidity with which his get are sought after, and the prices which they command.

CULTIVATION OF FLAX.

For the past five years great attention has been given in Ireland and some parts of England, to an improved cultivation of flax, which it would be well for the farmers of the United States to imitate. The value of flax and its seed might be made at the north and west, what cotton is at the south. It is said that Great Britain imports flax to the value of \$30,000,000 annually; 120,000 tons come to London alone. It is computed that it would require upwards of 400,000 acres of good land to raise this quantity of flax.

In a letter from Mr. Blow, published in Hunt's Merchants' Magazine, we make the following extract relative to flaxseed, and linseed oil:—

"In the consumption and sales of linseed oil, here, to the amount of \$5,000 or 200,000 gallons, it would require, say, 100,000 bushels of good flax seed, which at \$1.50 per bushel, (fifteen cents below the present market rates,) amounts to \$150,000. The manufacturer could pay the price and afford oil at 80 cents per gallon, and the farmer could receive a large return for his labor and capital, as I will presently show you,

and not the least of all, the money be retained at home—the simple fact is, that at present there is little or no seed in the country, and we are forced to import oil from all directions, reducing the usually heavy stocks abroad, until the value of linseed oil is so appreciated that it cannot be laid down here for less than \$1.05 per gallon, and scarce at this; whilst a further drain on the reduced stocks of England and Germany must run up this important article to an unprecedented price. But let us continue with the calculation. We are forced to buy 200,000 gallons of linseed oil to fill up the requirement of the trade—\$1.05, say \$210,000 Deduct the cost of same to consumers

and dealers of like amount, made from Illinois and Missouri seed, at the high price of \$1.50 per bushel for seed, 200,000 gallons, at 80 cents,	\$160,000
Loss to consumers and dealers by importing, instead of raising at home,	\$50,000
Again, as you doubtless know, and as numerous good farmers have told me, flax seed can be raised and laid down in St. Louis, wagoned 75 miles, at a cost of 80 cents per bushel to the producer. Then haul in 100,000 bushels, and sell it for	\$150,000
Deduct cost of the same laid down,	\$80,000

There is left the enormous profit to the farmer of \$70,000 which is certainly a large margin to work on.

Of the manufacture of linen and its value, Mr. O. S. Leavitt thus speaks in the New-York Tribune:—

"That we are on the eve of a great revolution in commerce and manufactures, growing out of a substitution of linen for cotton, there can be no question. Raw cotton is now worth 14 a 15 cents per pound, while linen filler can be procured for less than one third this price, especially in those districts where flax is grown for the seed only, the lint being thrown away as worthless, or at least not worth the expense and trouble of preparing it for market, in the usual way. In those districts, flax can be produced in the unrotted state—the very condition for producing fine linen at the least cost—for about two cents per pound. Then, by the use of machinery somewhat similar to that which I am now using successfully with unrotted hemp, in the manufacture of Kyanised cordage, flax can be broken out for less than two cents per pound. Then, by process of machinery, it can be refin

ed and rendered white and soft, capable of being spun into the finest yarns, for less than two cents more, being then in the condition which you so aptly term 'flax cotton.' This can be spun for about the sum required for cotton, thus reducing the price of linen yarns far below that of cotton. From this time forward, as you proceed in the manufacture of fabrics, the expense is about equal, the recent improvements in power looms for linen, having entirely removed all the difficulties which were experienced in this branch of manufacture some time ago, and from the great purity and whiteness of the linen fabric by the new process, the bleaching is rendered quite as simple and cheap a process as with cotton. By the new process, we are enabled to produce finer quality than heretofore. It was common in Ireland, when hemp was low and cotton high, to use the American dew-rotted hemp as a substitute for flax, but it could not be run to finer numbers—rarely finer than 30s. It can, however, by the new process, be easily run as fine as 100 leas to the pound. I have produced yarn much finer, in a small way, from hemp, both rotted and unrotted, though the latter is preferred.

"I observed the London press delighted with the prospect of English independence of American cotton growers. It is very true that England may not be obliged much longer to import raw cotton from the United States, but she will hardly like, in the place of it, to import manufactured goods, as she must do ere long. Flax cannot be transported far, in the unrotted state, in the straw, and farmers will not readily establish factories upon their plantations, for the purpose of producing 'flax cotton' for exportation. They will cut it, take off the seed, (which pays for the crop,) and haul it a few miles to a flax mill or linen factory, where they will sell it at a moderate price. When a manufacturer once begins to manufacture flax, if he is wise he will go through with it, and turn it off in the shape of either yarns or fabrics. Growing flax for the seed, alone, is considered, in many parts of the western states, a profitable branch of husbandry. What the farmer gets, then, for the straw or lint, now thrown away, he considers so much clear gain. It is proposed in Ireland to pay twelve pounds sterling, (\$60,) per acre for flax straw, leaving the farmer the seed; and who shall say that we cannot compete successfully with Ireland in manufacturing linen, when we can purchase quite as good, and quite as much flax, for less than one quarter of the money?"

POULTRY RAISING No. 5.

THE species of fowls known as Chittagongs, Shanghaes, Great Malays, etc., are without doubt fowls that will weigh, when mature, from 15 to 20 pounds per pair, (male and female,) and their flesh may be equal to our common varieties, in some cases, but oftener not so tender and delicate. Now, in order to have those fowls as profitable as our common varieties, they should produce double the number of eggs annually, or at least, double the weight of eggs that the ordinary breeds produce; but instead of such a result, we get but about two thirds the number, and the same weight produced by the common fowl. Dr. Bennett says in his treatise on poultry, (page 30,) of the Chittagong breed—and what is applicable to this breed will properly apply to all large breeds, in regard to their productive powers: "They do not lay as many eggs in a year as smaller hens, but they lay as many pounds as most of the best breeds." A pair of any species or breed of the large fowls, will consume double the quantity of food, or in the ratio of their weight, that a pair of common fowls consume, and only produce the same weight in eggs. From this fact, it follows that we can raise two pair of common fowls for the same cost of one pair of large ones; and yet, double the weight of eggs, and more than double the number of eggs in a year, than such large breeds will produce.

Now, it puzzles me to ascertain where the profit is in large breeds over small ones. If one never sells any eggs, a pound of large ones is worth as much for family use as a pound of small ones; yet, but very few persons, comparatively, use all the eggs that their fowls produce, and in the market, an egg is an egg, and large ones will not generally command a higher price than small ones. It appears to me that two pairs of round, plump, fat Dominique fowls, or any other good breed, when dressed, would be preferable to one pair of Chittagongs or Shanghaes of double their weight; that is, for the table. If this is a fact, and I firmly believe it is so, will some one be so good as to inform the public, through this medium, where the advantage or profit lies in large breeds over small ones? We want information on this point, and if some gentlemen who can tell a good story, and pocket \$5 for a pair of such breed, will come out and show from good, positive, incontrovertible authority that they are more profitable than small ones, he will be a public benefactor. It is my belief that most of the owners of large breeds at the present day, feel inter-

ested in keeping up the excitement about them. Hardly a man can be found who does not expect to have some for sale. Even if he does not admit it, he thinks of it, for where is the man who has paid \$5 for a pair who would not naturally have an eye to a few V's for his own trouble and expense, to say nothing of a regular speculator in the trade. T. B. MINER.

Clinton, Oneida Co., N. Y.

GUANO—HOW USED IN VIRGINIA, MARYLAND, AND DELAWARE.

EXPERIMENTS by some of the best planters in these states, during the last three or four years, have demonstrated that the most economical application of guano is at the rate of 200 pounds per acre, sown broadcast, upon very poor land prepared for wheat, and plowed in, *no matter how deep*, upon which sow the wheat and harrow or plow in without disturbing the guano. In no case, fail to sow clover upon the wheat, the time for which varies from November to May, in the opinion of different persons, for the benefit derived from the guano to the clover and through that to the land, is of more value than the wheat, and the average increase of that is at least, five bushels to the 100 pounds of guano used.

The great fertilising principles of guano are phosphate of lime and ammonia, which is very volatile and should not be exposed to the action of rain and sun upon the surface of the ground, unless mixed with plaster, or some other absorbing substance.

SOLON.

CULTIVATION OF RICE IN CEYLON.

THERE are no less than eleven kinds of paddy, (rice in the husk,) cultivated in the low grounds some of them requiring four months to come to maturity, and these are generally sown in March; others three months, and they are sown in June. One kind must remain in the ground as long as five months; while another, reared in very low grounds, comes to maturity in two. The growth depends so entirely upon irrigation, that the seasons for sowing, which vary according to the district and kinds to be sown, must be chosen when the streams are full, or when a sufficient supply of moisture during the period of growth is insured by a continuance of rain, either in the locality itself or in the heights where the streams rise.

The lands used for this lowland cultivation can be sown from season to season; but the hill paddy, of which there are also many kinds, will only grow on a soil which has for many years been undisturbed; and partly from its being so

exhausting a crop, partly from the poorness of the land, each crop requires newly-cleared land, and is never sown oftener than once a-year. Any deficiency of requisite moisture produces a total failure of the crops, and no artificial manure is ever made use of, the natural soil being assisted only by the ashes of the wood fires. It has been reckoned that, in the cultivation of hill paddy, the labor of two men will produce sufficient for the maintainance of three persons; whereas in the low grounds, the labor of one man will support three, and often more.—*Quarterly Journal of Agriculture*.

LEMMON GRASS.—Of the native productions of Ceylon, the most remarkable, and one we believe to be found nowhere else, is the lemon grass, (*Andropogon schœnanthus*), which may be seen covering almost all the Kandian hills, and is the best possible pasture for cattle—at least as long as it is young. This species of grass is very hard, and grows to the height of seven feet, and sometimes higher, and has a strong but extremely pleasant acid taste. It derives its name from having, when crushed, an odor like that of the lemon, so strong that after a time it becomes quite heavy and sickening, although grateful and refreshing at first. It covers the hills in patches—those, at least, that are not overgrown with jungle and underwood—and is to be found nowhere but in the Kandian district.—*Journal of Agriculture*.

THE USE OF THE FIELD ROLLER IN CULTIVATION.—We have often adverted to the great advantages of the roller on sandy soils. But while we deem its use almost indispensable to good crops on sandy, porous soils, we must claim for it a great advantage on almost any soil. After the ground has been thoroughly upturned and pulverised, it requires to be partially compacted again to render it suitable to hold the roots of plants firmly and give them their fullest support, and most rapid growth. Many farmers prefer to let their plowed fields rest some days after preparing them to receive the crop, before sowing, so as to allow of the earth settling well together. It is preferable, however, first to sow the seed, then settle the earth firmly around it by the use of the most approved kind of field rollers.

SINGULAR.—A cow belonging to Robert R. Briggs, of South Adams, Mass., brought forth a fine red calf about two weeks ago. In five days after, the same cow brought forth another calf, of a cream color.

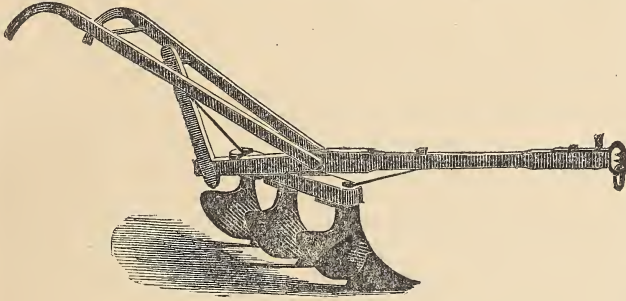
THE THREE-SHARE PLOW.

THIS implement is frequently used by thorough farmers, for plowing in their wheat, oats, and other small grains, when sown broadcast. There is a great advantage in its use for this purpose.

1. It requires going over the ground but once instead of several times, as with the harrow; for when properly done, every seed is effectually covered by the first operation.

2. It buries the seed deeper than is done by the harrow, which is advantageous for grain, as the roots thereby have a strong foothold, and the stem a firm support. This is a great preventive of winter-killing, so destructive in certain sections and on peculiar soils.

3. It leaves the ground in slight ridges, thus roughening the surface, which is a decided advantage to the growing crop. If to be followed by grass, without subsequent plowing, and the



THREE-SHARE PLOW.—FIG. 45.

ridges have not become levelled before the time for cutting the grass, as the rains and frosts will be very likely to do, a roller will speedily remedy the difficulty.

4. Rust, and perhaps smut, may often be prevented by having a series of uninterrupted parallel openings across the entire field, so as to admit the free circulation of air, as is the case where the wheat is plowed in with the three-share plow, or drilled or dibbled in with the seed sower.

A VIRGINIA PLANTATION.

Thou shalt not covet, is a commandment which we should not break; yet, if any one can visit Sabine Hall, and not disobey that injunction, he is a more perfect Christian than I can pretend to be. It is one of those noble old mansions which are to be found scattered all over the tide-water region of Virginia, marking an age of wealth and refinement, that in some measure has faded away. For the ancient families have forsaken the old halls, and in many cases, house and household are known no longer in the land that was once graced by their presence.

Sabine Hall still retains its pristine grandeur and is owned and occupied by as true a nobleman as ever welcomed a guest beneath the hospitable roof of a Virginia gentleman of the good old time. Let the traveller who happens to enjoy the pleasure of Captain Mayer's company upon the steamer Mary Washington, from Baltimore to Fredericksburg, (a very pleasant route it is too, and good boat and very accommodating officers,) ask him to point out this prominent landmark, a couple of miles below Tappahannock, on the opposite side of the river. It stands upon an elevated site, some two miles from the shore, overlooking a broad tract of rich bottom land, upon which great fields of wheat and corn are spread out in bounteous profusion. Covering the slope of the hill, immediately in front, is a terraced garden of fruits and flowers, and grassy banks; and a little lower down, a full supply of esculents for the table. Here the

fig ripens its luscious sweetness, and the peach gives its subacid goodness in great perfection. The carriage approach is from the rear, or rather the landward front, through a park of noble old trees, green grass, and hedges. There is one thing about this entrance which I wonder is not more common. A neat lodge stands by the outer gate, the residence of one of the house servants, and some of the children are always on hand to open and close it when passed by resident or stranger. The house itself is not extraordinary in its dimensions, nor grandeur of appearance; but it is sufficiently roomy, and is one of that class of old-time dwellings whose walls are as substantial as the hospitality which welcomes the stranger within.

Through the centre, runs a broad hall, big enough to parade a militia company; upon the right, are two parlors large enough to entertain another; upon the left, a dining room and sitting room, and between them a heavy wainscoted and balustered, deep-worn staircase, and a passage out upon the gallery of the wing, leading to the store rooms and kitchen. Of course, there is a gallery, or colonnade, upon the river front, for what finished southern house ever lacked this ornamental appendage?

The present proprietor, colonel Robert W. Carter, is a descendant of one of the oldest and most wealthy families in the state, and almost the only one upon the northern neck of Virginia, where the name was once great among the great names of that region.

Like many other countries which depend upon a single staple crop, this sunk into a state of unproductiveness, after its staple, tobacco, failed to remunerate the cultivator. Lands which once gave forth golden harvests, returned to a state of wooded wildness. A hundred years works wondrous changes. Old walls of extensive mansions, seen through avenues of old trees; fine old churches, dilapidated, though yet strong in their old age, speak of what this region was, ere Washington was born, for here was his birthplace. Till within a few years, but a little of the country besides the alluvial bottoms of the Potomac or Rappahannock, such as those of Colonel Carter, were considered worth cultivating. Now, a new era is dawning upon this long-neglected, poverty-stricken portion of Virginia. Guano, lime, plaster, bone dust, and other fertilisers have been imported; better plows, and other implements used; and if ever that adage was applicable to any country, it is to this, for truly, the wilderness has been made to blossom like the rose. Not only the desert places in the forest have been renovated, but such lands as those at Sabine Hall have been made to double their products.

Taking all things into consideration, there are few more desirable sections of our great country than this one, so long neglected and almost despised on account of its poverty. Certainly, there are few places that have more of the characteristics desirable to make a comfortable home, than can be found upon the fine plantation and noble old hall of the place I have endeavored to draw such a picture of as would interest my readers. SOLON ROBINSON.

THOROUGH DRAINAGE.

WE hope soon to have the pleasure of recording some of the favorable effects of subsoil drainage, in our own neighborhood, as a few of our intelligent friends on Staten Island, have, at our suggestion, imported a tile machine for the purpose of forming the materials for this important improvement. The undertaking is in the hands of spirited and wealthy persons, whose hearts as well as purses, are in the enterprise; and we are certain to hear favorable results from their efforts. Strange as it may seem, we have hitherto not had a single instance of thorough drainage in the neighborhood of this metropolis of half a world, where choice land is worth from \$150 to \$300 per acre for cultivation alone, for farming and horticultural purposes. Under-drainage, if thoroughly done, will cost from \$20 to \$40, and if in excessively stiff clay, perhaps \$50 to \$75 per acre. But we

are satisfied that no land requiring drainage will be benefitted less than 25 per cent., while the very stiff clays will be much more than doubled in value, for all tillage purposes.

What then is the result? Taking the minimum price of land for agricultural purposes, and the minimum improvement of it by drainage, we shall have an increase of their intrinsic worth by this operation, of \$37.50 per acre, while in the more valuable and stiffer clay, we may have an increase of more than \$150. This last amount of improvement, we have no doubt will be fully realised in some of the lands now surrounding the city of New York.

Of the wonderful effects produced by under-drainage, we quote from a late Agricultural Gazette, (English paper,) the experience of one of its intelligent correspondents, Mr. J. M. Paine. He says:

I have drained land of the very stiffest description over a very considerable extent, (during the last eight or ten years,) and have had no occasion to use any furrows whatever. The land upon which I have operated is the *gault clay*, which is by many degrees stiffer and more compact than the London clay. Here, for acre after acre there is not a single furrow, and I can safely assert that after the late unusually heavy rains of last January upon these fields, when the rain had ceased an hour or two, no water whatever could be seen, though it was running away in torrents through the drains.

Many years ago, I experimented on this description of land on a small scale; and I then found that the drains ought not to be more than 15 feet apart in order to be thoroughly efficient. This gave me confidence as to the method to be adopted in my future proceedings, though I must confess I was half deterred by the prospective cost; it was enormous, equal to half the fee simple of the original value of the ground. But I persevered, and I am happy to add that I have had no reason to repent of the outlay, as I have been amply repaid in the subsequently exuberant fertility of the soil thus treated. In this land, the drains are from four to five feet deep and from twelve to fifteen feet apart. The cost was £16 per acre. And here I again repeat, that, after the heaviest rains or melted snow, the surface of the land is in appearance as dry as if it rested on a sand bed.

Only a few years ago, what is commonly termed thorough draining was a most unpalatable necessity, obtruded upon land owners, and was for a long time resisted; but it is now almost universally acknowledged to be the foun-

dation of good farming; and they only have acted wisely who have obeyed its requirements. But, on the other hand, it may be stated, for the comfort of the farmer in these disastrous times, that this very stiff land, after drainage, with proper cultivation and manuring, is capable of procuring enormous crops, both of grain and roots; this I can testify to from experience.

I will give another instance or two, from farms not in my occupation. The first is a small farm, of about 40 acres, which I drained last year. This land was unusually wet and although it was thrown up in high narrow furrows of about eight feet wide, it was impassable for horses, excepting in the driest weather, when the ground baked up as hard as a brick. The seasons for sowing were frequently lost, as the land could not be got ready in time. Now the drains in this farm were put in at four and four and a half feet in depth, and at distances varying from 15 to 30 feet, such as from the character of the soil I deemed sufficient, the surface soil not being of one uniform texture. After the draining was completed, I recommended the tenant to throw down all the high ridges, and lay the ground perfectly flat. He followed my advice, and the land has ever since been thoroughly dry, without indicating the necessity of retaining any furrows. I walked over this farm during the wettest part of January; there was no water at all to be seen on the surface, and the ground under foot had become perfectly sound; though previous to the draining, after similar heavy rains, I have often seen, on the inclined surfaces of the fields, gullies washed out two and three feet deep, and the flats of the fields were so rotten that a person could not walk on them without sinking over his shoes at every step. The subsoil of this farm is also the gault clay.

I will only mention one more instance, taken from the land of a friend and neighbor of mine. The land he has drained rests upon the London clay. Previously it was a very poor wet pasture ground, producing little besides rushes and moss. He could not obtain a tenant for it at 2s. 6d. an acre. He therefore determined to drain it, and occupy it himself. His drains are placed four feet deep, and thirty feet apart. The remedy has proved effectual, the land being as good now as the rest of his farm, and he could readily let it for 30s. per acre.

Here, again, we have an illustration of the non-necessity of open furrows derived from an experiment over some 50 or 60 acres, the whole of which now lies perfectly flat.

It is obviously impossible to lay down any uniform set of rules as to the proper distances at which drains should be placed so as to make them thoroughly efficient; these must be regulated in each case, by the texture and consistency of the soil; but I do most unhesitatingly maintain, if the land be truly underdrained, that is, deeply enough and thickly enough, that open furrows to carry off surface water are more than useless. To the scientific farmer, it would be mere waste time to descant upon the advantages accruing from water percolating through the soil instead of running over it; and more particularly since so much light has been thrown upon the *rationale* of the benefits arising from the percolation of water, by the individual discoveries resulting from the investigations of Professor Way and Mr. Thompson on the manuring absorptive power of clay in our agricultural soils. I ought, perhaps, to add that I invariably trench or subsoil immediately after draining.

This afternoon, I walked to my farm to see the effects of a continuous, heavy 12 hours' rain upon the land. I consider this a capital opportunity for testing the accuracy of my statement relative to the absence of all surface water, upon my thickly and deeply-drained land; for before the storm of to-day during the past week, the rains have been so heavy as to saturate the soil with water, and our low grounds have been constantly flooded; so I thought if ever water was to be seen on the surface, I should find it there to day. It was pouring with rain when I started from home, but there was a temporary clearing up of the weather about five minutes before I reached this part of my farm, in company with my bailiff. We walked over every part of the stiffest gault-clay field that I possess, containing about 12 acres; and I can most confidently assert that there was no water whatever on the surface, and there was no symptom of the slightest rill having run upon the surface, during the heaviest period of the rain. In fact, every drop of water percolated through the soil into the deep drains below, from whence copious streams were issuing like little rivers. Moreover, it so happened that in this field there were 20 or 30 holes dug about it in different parts, each two feet deep, and they were all free from water, with the exception of two or three on a quarter of an acre, in one corner of the field, where the drains were placed 18 feet apart, instead of 12 feet, as in all other parts of the field—here there was about two inches of water at the bottom of the holes. This field is

in hops; the ground has not yet been dug, but the hop hills are cut; thus leaving, at every six feet, little circular basins, six inches deep, most excellent receptacles, therefore, for the retention of surface water, if there had been any. Afterwards, indeed, on returning home, on lands not drained, I found these little basins filled to the brim with water.

THE ANALYSIS OF SOILS—ITS HIGH VALUE TO THE INTELLIGENT FARMER.

FORMERLY, the attempt to examine the soil of any particular field, with the view to ascertain the proportions of the various elements necessary to support vegetation which it contained, would have been considered a downright absurdity. But, with the introduction of steam engines, magnetic telegraphs, and the thousand-and-one improvements of the present age, which are made to contribute directly, and to an incredible extent, in the perfection of every art, and the economy of the processes by which it is accomplished, the farmer has, at length, come forward to the man of science, and asked his aid in furtherance of their ancient and honorable craft. They find—the most intelligent of them at least—that there is something besides mere chance which presides over their fields and crops, and that brains applied to the soil are capital manure, a most excellent stimulus to production. They consequently have sought for the materials entering into any particular crop they wish to produce; next they have ascertained how many, and in what condition these elements are to be found in the field to be tilled; then, by comparison, they know what is necessary to add, to give an abundant nourishment for the crops proposed to be grown upon the land. This is so plain and common-sense-like, that a school boy just commencing his addition and subtraction, and even before he reached his multiplication, would be able to understand and readily admit its propriety. Yet, strange to say, a large portion of the farmers of this, and every other country, do not yet comprehend it. Many, however, who have long cherished a desire to thus examine their fields, have been incapable from their own want of chemical knowledge, nor have they known where to procure the information from others.

We are happy to be able to direct the attention of such to our intelligent correspondent, Dr. Antisell, who is fully competent to make the analyses of all soils.

The advantages resulting to the farmer from this knowledge, are, that he may know with entire certainty, the particular kinds of manure

required to be furnished to the soil in addition to what it now contains, for the crop to be raised. The field may have an abundance of lime, potash, and soda, yet be deficient in sulphuric and phosphoric acids. For the former, it is necessary to apply sulphate of lime (gypsum); for the latter, bone dust only is necessary. Is soda wanting, salt is to be added, barilla or sea weed. If potash is the deficient ingredient, then ashes, leached or unleached, are to be applied; the last containing much the greater proportion of potash. But in addition to potash, ashes are full of vegeto-mineral matter—it is all vegetable remains, the skeletons, (broken up and reduced to powder,) of the ancient monarchs of the forest, or it may be its youngest saplings; but, from whatever source derived, they are pure vegetable remains, and are best suited to the reproduction of new forms of vegetable life. Thus, besides yielding potash, which is held in large proportions in ashes, and being easily soluble, is most readily parted with, they furnish soda, magnesia, phosphoric and sulphuric acids, lime in large proportion, the silicates, &c., so that, in applying them for manure, we give a more comprehensive variety to the land than can be had in any other form, unless it be in the unburned remains of what once constituted organic life. If the land be well supplied with mineral manures, vegetable matter only may be required, and this may be found in peat, chip manure, or green crops, to be plowed in.

Sometimes the soil may be abundantly supplied with all the elements for plants, yet be unsuited to their growth, from too great moisture, as in low lands; too impervious to rain and air, as in very stiff clay; too loose and light to hold the moisture and the roots of plants. For all of these mechanical deficiencies, not the chemist, but the skillful laborer is required. You must drain the first; drain the second, if possible, besides loosening the texture by deep subsoil plowing, and applying coarse vegetable manures. For the third, you must add lime, ashes, peat, green crops, or other vegetable manures, and especially must you apply the roller, thoroughly to compact and settle the particles of the soil together, and around the rootlets of the plant, thus enabling the soil both to retain the water, (by the capillary attraction of its particles, which do not act at greater distances,) to give firm support to the roots and to supply by their immediate contact with them, their soluble food to the spongioles of the plants.

Again, some crops take a great deal more of

certain substances from the soil than others, and it is essential to know at what rate we are exhausting each of the materials of the soil, in order to return the exhausted portions, and at all times maintain a full supply. Thus the clovers require gypsum; wheat and the white grains, potatoes, and turnips, bone dust; grass requires bone dust and ashes, &c. This is not all these crops demand; they need more or less of the ingredients contained in every one of the manures, but they consume them in varying proportions, more of one kind and less of another.

There are certain manures of universal application; such as ashes among the mineral substances, and farmyard manure and guano, the latter combining both the animal and mineral, and the former, animal, vegetable, and mineral. Guano and the muck heap may be taken for the use of every soil and every crop, with absolute certainty that we cannot go amiss. They are, therefore, the safest of all manures for the use of the ignorant and unskillful. To the more initiated, however, some simple mineral substance may be found, on analysing the soil, to be all that is necessary to add, as carbonate of lime, gypsum, salt, &c. They can thus furnish the deficient ingredients at the cost of a few shillings per acre instead of as many dollars, which the ignoramus must expend for supplying an assortment from which the vegetables can extract the one or more they need.

For the purpose of rendering this necessary aid to the farmer, we have secured the services of Dr. Antisell, who may be consulted at his office, No. 63 Franklin street, or addressed through the mail. By sending him specimens of soil, a report on them can be immediately returned, with full explanations as to the proper mode of treatment. Thus, not only the ingredients of the soil can be given, but those required for successive crops may be indicated, as well as the most economical sources from which they can be procured.

We commence this new feature of our periodical with an analysis of soils received from Dr. Blake, for which, and Dr. Antisell's analyses, accompanied with remarks and advice, see the following columns.

A CHEAP AND EXCELLENT MANURE FOR GOOSEBERRIES.—A French nurseryman says that exhausted tan bark spread on the surface, around the roots of gooseberry bushes, is an effectual remedy for caterpillars. A cart load of bark is sufficient for a large garden.

PRACTICAL AND SCIENTIFIC FARMING—ANALYSES OF SOILS.

I HEREWITH send you two samples of soil taken from one of my fields, to which was applied, a year or two since, about 80 bushels of lime to the acre.

After analysing these soils, I wish you to inform me in what chemical constituents the land is deficient, and what manures or fertilisers, with the quantity of each, per acre, will be necessary to be added to render it suitable for the following crops, namely, Indian corn, oats, wheat, and clover.

Respectfully yours,

JOHN L. BLAKE, Orange, N. J.

To Dr. Thos. Antisell, New York.

The following is a copy of the analyses of the soil and subsoil of the above samples as made in the laboratory of Dr. Antisell, which we publish for the benefit of our readers; and we recommend others who are in need of similar information, to adopt the same praiseworthy plan herein offered by Dr. Blake.—EDS.

	<i>Surface soil.</i>	<i>Subsoil.</i>
Organic vegetable matter,	4.56	0.83
Fine sand and silicates of lime and iron,	86.20	86.00
Alumina,	2.27	3.20
Per-oxide of iron,	0.26	0.43
Oxide of manganese,	—	0.06
Lime,	0.44	0.80
Magnesia,	0.21	0.45
Potassa,	0.01	0.04
Soda,	0.03	0.06
Chlorine,	0.04	0.08
Sulphuric acid,	0.11	0.05
Phosphoric acid,	—	trace
Carbonic acid,	0.06	—
Loss,	0.01	—
Moisture,	5.70	4.00
	100.00	100.00

The amount of organic vegetable matter in the soil is in moderate quantity, not sufficient for grain crops. It is in great part composed of undecomposed roots, and which, when separated, leaves a very small portion of vegetable matter in a rotted condition, fit for the immediate use of plants. It therefore requires that more vegetable matter should be added.

The quantity of lime is much too small either for the crops to be raised or for acting upon the rootlets not yet decomposed into mould. Thirty bushels of caustic lime will bring the amount of that substance in an acre of ground three inches deep, over one per cent. This will be the smallest quantity that should be added, and it will need repeating for every crop of wheat. It would then, perhaps, be better to add it in the compost form. In any case, it must be added previous to, and independent of, the following manures. There is sufficient sulphuric

acid present in the soil as soluble sulphates, to supply the wants of the rotation.

The soil contains much too small a quantity of the alkalies, potash and soda, but only a trace of phosphoric acid. These, also, will require to be added. Contrasting the subsoil with the surface soil, we find the former to contain an increased amount of those substances, excepting the sulphates; and thence, it is capable of adding these mineral matters to the surface soil. Whether the crops will obtain what they require from the subsoil, will depend, however, upon the facility of the roots to penetrate the earth, and upon the flow of water through the subsoil, to bring into solution these matters. As these contingencies cannot be depended on, it would be unsafe to trust to this source alone, or in great part.

The rotation, consisting of Indian corn, oats, wheat, and clover, will require, besides other substances not necessary to be added, such as silica, alumina, and oxide of iron, large amounts of alkalies and earths. If we suppose a crop of 68 bushels to be raised—50 bushels of oats, 25 bushels of wheat, and two tons of clover per acre, there will be removed off the soil by these four crops, the following weight in pounds of these important mineral substances:—

	Pounds.
Potash,	100.35
Soda,	29.00
Lime,	104.60
Magnesia,	33.00
Sulphuric acid,	54.65
Phosphoric acid,	36.63
Chlorine,	8.10
	—
	366.33

The corn draws the largest portion of this amount, being equal to 140 pounds, composed of sulphuric and phosphoric acids, lime, and potash. Therefore, it would require per acre of

	Pounds.
Unleached wood ashes,	200
Common salt,	20
Gypsum,	60
Bone dust,	120
	—
	400

This should be incorporated with seven cubic yards of farmyard manure; 100 pounds of guano might be substituted for the bone dust with advantage.

For the wheat and oats, the following substances might be added in a compost, per acre:—

	Pounds.
Wood ashes,	100
Nitrate of soda,	50
Crude Epsom salts,	40
	—
	190

This will supply the deficiency for both crops, having in view the residual matters left in the soil which the corn had not removed.

The most efficient manure for clover, scattered broadcast, per acre, would be of

	Pounds.
Gypsum,	150
Crude sulphate of soda,	75
	—
	225

THOMAS ANTISELL, M. D.,

Analytic Chemist, 63 Franklin st., N. Y.

New York, May 21st, 1851.

The fee for analysing soils and giving advice, will vary from \$5 to \$10. Please to address Dr. Antisell, as above, for all further information on this subject.—EDS.

REVIEW OF THE MAY NUMBER OF THE AGRICULTURIST.

The Tea Plant.—Dr. Smith proves conclusively, (to himself,) that tea can, and will be grown in this country cheaper than in China. It will be hard to convince an old Chinaman like me, that tea will become a profitable crop in *cotton-land*; or that corn-fed-hog-and-hommony-eating negroes, will ever become the patient, industrious, nice workmen that the Celestials are. If the climate will grow a good-flavored tea, and if the leaves can be gathered by machinery, dried by lightning, packed by steam, sold by telegraph, and fortunes made and spent in a space of time shorter than a Mandarin's cue, the business will suit the genius of the American people, and not otherwise. However, this is an age of wonders, and no telling what may become fashionable.

Southern Cattle, should have been entitled *Texas Cattle*. Owner of 3,000 cattle, and yet without milk or butter! Yes, and you might have added, without all the other comforts and conveniences of life; and destitute of a home possessing any of the attributes calculated to make life worth enduring. Such is generally the case with men who rely upon these overgrown herds of cattle, rather than upon the cultivation of a fertile soil. This writer thinks Texas will be one of the greatest stock-raising countries in the world. Then it will be the poorest state in the Union; the poor granite hills of New England will have to send them butter and cheese, to feed the few that ever enjoy such luxuries.

Cultivation of Corn.—One acre manured at a cost of \$11—product 136 bushels of sound corn, and two and a quarter loads of fodder! I have known the two left-hand figures made without.

any manure, but *some folks* are not satisfied with that.

Ruta-Baga Turnips.—One thousand and fifteen bushels from one acre! This shows what may be done, if farmers will only try. But let me inquire whether this manuring of Mr. Hallock's was not more expensive than an application of guano would have been? I hope no one will mind your hint about the *book*, it is only *book farming*, when experiments fail.

California Farming.—Deliver me from it. Why, suppose just as your potatoes are in blossom, some fellow discovers a yellow speck in your potato patch. Away goes your crop, root and branch, *prospecting* for gold without any prospect left for potatoes.

Pork—Bacon—Ham.—Another excellent article, and the information is none the worse for coming from England. Although a hoggish country, we are not quite so well up to bristles as we might be, notwithstanding we sometimes get up our own, when other pigs elevate theirs at us. I advise readers to re-peruse this article, and then, while they take a last fond look at the slab-sided, long-snouted brutes in their own yard, make a solemn resolution that old friends must part, without a grunt.

Swamp Draining of Southern Lands.—There is another sort of draining of southern lands, which will swamp the whole of the owners, unless they dam the drain pretty soon. It is a drain of all the fertility of the soil by a system of cropping which will soon compel them to take to the swamp, or some other tall timber, to make cotton. I am glad to see your South-Carolina friend is so successful in his experiments at draining. I have a sort of vague notion that some lands as far north as the blue-stocking state, might be drained to advantage. Suppose some of your bog-meadow gentlemen try your hand.

Draining Tiles.—Information worth a dozen dough machines. It would be worth still more if these great improvers of the soil were more, generally used. There is a vast amount of land in America, that only needs draining to become very productive, which is now nearly worthless.

Good and Bad Effects of Salt on Animals.—Another long title. Salting stock is shorter and better. Who is Medicus? On which side is he arguing—for or against the use of salt as food for cattle? Your correspondents took the position that it was not a necessary of life with healthy animals, not against its usefulness as a medicine. [How will they be kept in health without it?—Eds.]

How to Make Home Happy.—"Always be cheerful." This is the substance of that chapter; yet, it is an untrue axiom, or I do not understand the definition of the words, "happy, lucky, fortunate, successful." Now, I have seen a few *homes*, where luck, fortune, and success never entered; yet the inmates filled every definition of the word cheerful, as given by Noah Webster. Let industry, energy, and constant perseverance determine to make home comfortable, by adding conveniences and embellishments, and the dwellers therein will have a happy home.

What Seed will You Plant?—Five lines of words instead of these seven—"As ye sow, so shall ye reap."

Plows and Plowing.—It is refreshing to find an article like this, plainly written upon a plain subject, with lucid explanations of lucid drawings, that all lucid minds can elucidate to their entire satisfaction. I am glad to hear that some plow manufacturers have at length learned a modicum of common sense about placing the beams higher. It has been one of the greatest faults for years, to be found with cast-iron plows, that the beams were so low that whenever used in stubble or foul land, they were a constant torment to the plowman, and almost useless as a plow. Every effort that I have made to urge makers to adopt the improvement, has been met with the killing reply, "How would a plow look with a beam twenty inches high?"

Ladies' Department.—This page is occupied with a very sensible article about English women, but it is out of place—it has no business in this department. My girls say there is an implied contract, if not a written one, by which they are entitled to have this page filled every month with little bijouterie of household economy—recipes for cookery, washing, dyeing, coloring, gardening, and a thousand et ceteras, any one of which is worth more than the whole cost of the paper. Do you think they are particularly interested in an essay that holds up English women as superior to American ones? It is all very well for a bachelor or an editor, far removed from the influence of black eyes and blue, to have an article like this hung up in his bed room, to remind him continually what fine women there are just over the other side of the pond, but it is sadly out of place in the ladies' room. It is a breach of contract of which I hope the Agriculturist will not be guilty again. Be assured, sir, if you lose influence in the "Ladies' Department," you may as well stop publishing. Trespassing upon their rights, let me tell you, is about the surest way to get up a

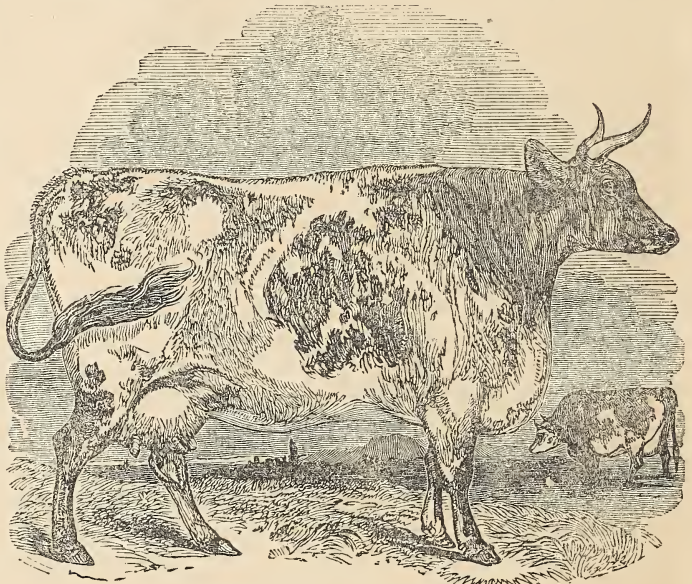
mutiny in the old ship. Let me tell you, Mr. Editor, when you have sailed as many years as I have under the same flag, you will learn to trim every sail to catch the favoring breezes from woman's smile. Better give them two pages than rob them of one. REVIEWER.

THE YORKSHIRE COW.

THE accompanying cut of a Yorkshire cow, from Youatt & Martin's work on cattle, recently published by C. M. Saxton, of New York, is an excellent illustration of what we have often endeavored to inculcate in our pages, of the great advantages to the dairy farmer of a few crosses from the male of a milking family of shorthorns, on good native milking cows. By adopting this principle in breeding, the farmer may calculate almost to a moral certainty on obtaining nine good milkers out of every ten heifer calves properly reared; he also gets an animal that matures at least one year earlier than common cattle; and one, that after being dried off, will fatten more readily and profitably than a native.

Youatt thus describes this cow: "A milch cow good for the pail as long as wanted, and then quickly got into marketable condition, should have a long and rather small head; a large-headed cow will seldom fatten or yield much milk. The eye should be bright, yet peculiarly placid and quiet in expression; the chaps thin, and the horns small. The neck should not be so thin as common opinion has given to the milch cow. It may be thin towards the head; but it must soon begin to thicken, and especially when it approaches the shoulder. The dewlap should be small; the breast, if not so wide as in some that have an unusual disposition to fatten, yet very far from being narrow, and it should project before the legs; the chine, to a certain degree fleshy, and even inclining to fullness; the girth behind the shoulder should be deeper than it is usually found in the shorthorn; the ribs should spread out wide, so as to give as round a form as possible to the carcass, and each should project further than the preceding one to the very loins, giving, if after all the milch cow must be a little wider below than

above, yet as much breadth as can possibly be afforded to the more valuable parts. She should be well formed across the hips and on the rump, and with greater length there than the milker generally possesses, or if a little too short, not heavy. If she stands a little long on the legs, it must not be too long. The thighs somewhat thin, with a slight tendency to crookedness in the hock, or being sickly-hammed behind; the tail thick at the upper part, but tapering below; and she should have a mellow hide, and little coarse hair. Common opinion has given to her large milk veins; and although the milk vein has nothing to do with the udder, but conveys the blood from the fore part of the chest and sides to the inguinal vein, yet a large milk vein



THE YORKSHIRE COW.—FIG. 46.

certainly indicates a strongly-developed vascular system—one favorable to secretion generally, and to that of the milk among the rest.

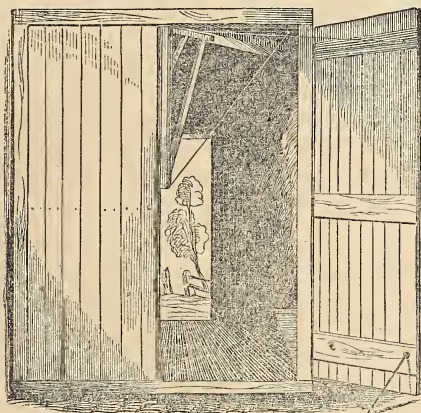
"The last essential in a milch cow is the udder, rather large in proportion to the size of the animal, but not too large. It must be sufficiently capacious to contain the proper quantity of milk, but not too bulky, lest it should thicken and become loaded with fat. The skin of the udder should be thin, and free from lumps in every part of it. The teats should be of moderate size; at equal distances from each other every way; and of equal size from the udder to nearly the end, where they should run to a kind of point. When they are too large near the udder, they permit the milk to flow down too freely from the bag, and lodge in them; and when

they are too broad at the extremity, the orifice is often so large that the cow cannot retain her milk after the bag begins to be full and heavy. The udder should be of nearly equal size before and behind; or, if there be any difference, it should be broader and fuller before than behind.

"The quantity of milk given by some of these cows is very great. It is by no means uncommon for them, in the beginning of the summer, to yield 30 quarts a day; there are rare instances of there having given 36 quarts, but the average may be estimated at 22 to 24 quarts."

VALUABLE IMPROVEMENT FOR FASTENING CARRIAGE-HOUSE DOORS.

MR. JOSEPH SAYRE, a young farmer of Orange county, New York, is entitled to the credit of this invention; one which entirely obviates all trouble of putting in and taking out a cross bar or upright post to hold the double doors.



CARRIAGE-DOOR FASTENING.—FIG. 47.

The improvement consists of a triangular frame, the upright of which should be in length equal to the width of one door, and the cap about the same length, with two braces. This frame is hinged, one end to the cap of the doors, and the other upon a beam, at right angles within the room, so that when in place, the upright occupies the position of the upper half of a post, to which the doors are hooked or fastened in any other way. From the inner corner of one door, a cord runs to a pulley in the centre of the cap, and along that to another pulley near the end, and then to the lower end of the upright; now, as the door opens, the cord draws the frame up to the cap, entirely out of the way; then throw the inner brace off the hook, and it holds the door open. As the door closes, the frame comes back to its place, and the doors are made fast, just as they would be to a post.

FINE APPLES.

WE had the pleasure of a call, last May, from Mr. Albert Chapman, of Middlebury, Vt., who brought us specimens of some very fine apples raised by him; all of which were of a more spicy flavor and solid flesh of their kinds, than those raised in the richer soils of the west. Among these, were the "Baldwin," which at present bears the highest price in market, and is among the most profitable apples grown; the "Roxbury russet," also highly profitable; the "sweet russet," which we devoured with such gusto in the spring of the year, when a school boy, on holiday visits to our grandfather's farm in Old Hampshire, Massachusetts. It is unaccountable to us why this delicious apple is not more cultivated in this vicinity. We have heard it objected that the skin was tough and the flesh shrivelly; nothing can be more untrue of these samples of Mr. Chapman's. We know of no other sweet winter apple that keeps so well. We have often eaten them as late as July, more luscious to our taste than sugar plums.

ABSORBING POWER OF PEAT AND CHARCOAL.—

Dr. Anderson, chemist to the Highland Agricultural Society of Scotland, has lately tried several experiments with peat, both raw and reduced to charcoal. He finds that the charcoal is a powerful deodoriser, (remover of smell,) but not an absorber of ammonia. The greatest amount of ammonia he found to have been taken up by filtering putrid urine through it, was $\frac{1}{16}$ of one per cent. The peat itself, when dried at 212° F., was found to absorb 2 per cent. of ammonia, while still dry to the touch. After exposure to the air in a thin layer, for 15 days, it retained $1\frac{1}{2}$ per cent. This shows the invaluable properties of the raw article; and if the results of Dr. Anderson are correct, we must give up the use of peat charcoal, as an absorbent of ammonia.

AN INFALLIBLE REMEDY FOR ROT IN POTATOES.

—So say several old practical farmers in this vicinity. "When you drop the seed, put one pint of slacked lime on it, in each hill, and then cover."

We beg leave to claim a patent right on the above, as we have repeatedly published it in the *Agriculturist*, and very few have yet practised it. We suppose the reason was it got into a *book*, and from that moment became *valueless*.

TO KILL LICE ON POULTRY.—Boil onions several hours, thicken the water with meal, and feed to the poultry.

Horticultural Department.

BY L. F. ALLEN.

PRELIMINARY REMARKS.

EVERY man who lives in the country, whether a farmer, a professional man, or an occasional resident for the summer months, should be more or less of a horticulturist. To the farmer, horticulture is the fine art of his vocation, besides being, if properly managed, the most profitable branch of his cultivation; and beyond all these, there is no part of his estate, and no portion of his time that yields so much luxury to his table, and so much enjoyment to his family and friends, as the bounties gathered from the fruit, the vegetable and the flower garden. A well-studied economy directs him to have a large and well-supplied kitchen garden. Household comforts, and the well-timed and healthful luxury of good fruits, in which he may most properly indulge, stimulate his pomological efforts; while the innocent pleasures and contemplations to be gathered from the care and admiration of those beautiful "day stars," and "floral apostles" of Horace Smith, which adorn his flower garden, will add a grace and charm to his female household, which all other productions of his farm, without them, would not yield.

The professional man, if he be a man of business in his line, requires hours of relaxation from the oftentimes severe labors in which he is engaged. What recreation so delightful, so peaceful, so perfectly restoring to the overworked energies of the mind and body, as the garden or the orchard? Lord Bacon, the most profound moral philosopher of his age; John Milton, whose name is to perish only with his language; Sir William Temple, the most accomplished diplomatist of England's most difficult period, all sought their purest relaxations among their fruit trees, and amid flower borders. These names are but illustrious selections from the long catalogue of great and good men, to say nothing of the Hannah Moores, the Jane Porters, and others equally celebrated among the gentler sex, who have sought their choicest pleasures in the garden which their own hands carefully tended. Such names show conclusively that horticultural pursuits—and they are but corroborations of the sentiment of still earlier and equally illustrious examples—are among the most excellent and refined that can be sought for our recreation, as well as for our employment.

It is a gratifying incident that among the wonderful physical progress—the moral pro-

gress we lay aside for the present—which the civilised world has for the past forty years achieved, that, prominent among other labors, horticulture has received its due share of attention. The intelligent and well-directed labors of scientific men have introduced many choice varieties, both of fruits and flowers, into notice, within the present century, and improved methods of propagation and treatment have developed qualities and features in both, to which our fathers were strangers. Obedient, also, to the grand organic law of man's fallen state, that "by the sweat of his brow" he shall eat his bread, with our progress in developing the choicer fruits, have the encroachments of their enemies, disease, and blight, and insects followed in their train, taxing our ingenuity and patience in an equal degree, that their production and proper cultivation have done. These last, equally with the production of the fruits themselves, demand the attention of cultivators; and as we have given so prominent a position to this branch of American agriculture, we shall devote several pages of our periodical hereafter, to the pomological and horticultural department, and by thus doing, make our pages more interesting if possible, to our suburban friends of the cities and large towns of the country.

BARKBOUND TREES.

SOME over-wise people have an idea that when a tree gets mossy and barkbound—the latter but another term for the want of growth, and weakness, consequent upon neglected cultivation—it is only necessary to slit the bark up and down the stem with a jackknife, and it will at once spread out and grow. This is sheer nonsense. Dig about and cultivate the roots, and the bark will take care of itself, with a scraping off of the moss, and a washing of the stem with ley or soap suds, or chamber slops, which last is quite as good. The increased flow of the sap, induced by a liberal feeding of the roots, will do its own bursting of the "hide-bound" bark, which is simply its enfeebled condition as a consequence of its poverty of root. No one thinks of turning out a bony, half-starved calf in the spring, into the clover field with the skin on its sides all split through with a knife in order to add to its growth. And this last proposition is quite as sensible and philosophical as the other. Nature takes care of itself in these particulars. Sap in plenty is what the blood is to animals. Its vigorous flow reaches every part of its composition, and gives to each its proper play and function. We can show

frequent instances of a decrepit shrivelled branch, by the throwing open and manuring of the roots and a thorough pruning of the whole top, increasing from an inch to two inches diameter in a single season; and without assistance as it grew, bursting and throwing off its old contracted bark as freely as the growth of a vigorous asparagus shoot would develop itself during a warm shower in May. Such nostrums are only the invention of the head to excuse the laziness of the hands.

CULTIVATION OF FRUIT TREES.

Nothing more rapidly develops the growth of trees and shrubs—ornamental indeed, as well as the fruit bearing—than early and thorough cultivation in the growing season. In grass grounds, and lawns particularly, where trees are planted, but a feeble and imperfect growth will succeed the close binding of grass about their roots. The earth should be thoroughly dug for several feet around the stem, and then mulched to the depth of three to six inches, with coarse litter, to keep the drying sun from the roots, and prevent the escape of the volatile gases which most promote their energies. Around larger trees and in less choice grounds, a thorough plowing of four, six, or eight feet distance from the stem, is a more expeditious and equally effective practice. In a growing young orchard of our own, consisting of near a thousand apple trees, in a luxuriant meadow, where forking around the trees and mulching has answered our purpose heretofore, we have this spring applied the plow, throwing the first furrow, say six inches deep, against the bole of the tree, commencing the cutting with the plow at six feet distance as we approached it, going through the entire row of trees in the orchard, and then returning on the other side, and so continuing until four broad furrows were turned, each one towards the tree, thus making a square, averaging eight feet, around the stem of each tree, of thoroughly-broken ground. This plowing leaves the surface in a rough state, (the rougher the better,) for receiving the rains and air to the roots, and answers all the purposes of plowing the entire field, when the trees are young. As they increase in size and extend their roots, the width of plowing may be increased, and the fertility of the soil, that might be otherwise expended in a growing crop of grain or roots, all given to the tree, which is a gross feeder. Neither is there any waste in this mode of cultivation. Less grass is obtained

from the quantity of soil thus broken, we admit; but the increased growth of the tree and the superior quality of the fruit amply compensate such loss; and a parsimonious treatment of the tree will be sure to react upon the stunted cultivation or feeding it may get at the hands of its cultivator. If this proposed mode of treatment be neglected until July even, it will then be of service, as trees often make a vigorous second growth from stimulating causes, after the early or first growth of the season is apparently finished.

The decomposition of sods promotes the growth of trees equal to any other thing; and in exhausted soils, lime, spent ashes, phosphate of lime, (bone dust,) may be added to supply the inorganic substances necessary to produce the wood, leaf, and fruit. If these manures be thrown upon the surface of the broken sods thus turned up by the plow, they will find their way into the earth with the rains; and the frosts of the succeeding winter will give them all the incorporation into the soil which they require. In addition to this plowing, even if abundant mulching material be at hand, a forkful or two of coarse barn litter or straw may be thrown around the stem of the tree, thus adding to the permanent moisture by preventing its sudden evaporation by the sun. Our own experience has entirely convinced us that nothing will pay surer and readier than liberal cultivation of our fruits, if it be an object to grow them at all.

BARK LICE ON TREES.

LICE are wonderfully destructive to both the growth and health of trees; and the rapidity with which they increase when unmolested is astonishing. They are the color of the bark itself, and in shape and size like a flax seed. In frequent cases, they actually kill the branch they settle upon, and in young trees, often kill them altogether. The most effectual cure for them is to scrape the bark thoroughly, and give the tree or branch a washing of strong ley or soap suds, or what is the same thing, a strong solution of potash. This insect, or rather parasitic plant—for the dividing line between animal and vegetable life is so indistinct that it may be termed either—appears to be migratory in its habits, often attacking the thriftiest as well as the weakest trees, and its progress should be arrested before it ravages the whole orchard.

BARK LICE are devoured by millions by wrens, chick-a-dee-dees, and other similar birds.

Ladies' Department.

FOOD OF CHICKENS PREVIOUS TO WEANING.

As to the food of the young brood, let them have anything which is not absolutely poisonous. Sloppy matters are better avoided till the little things are old enough to eat a few grains of good wheat, of the best sample, which will then not be thrown away upon them. Meat and insect diet are always necessary; but raw vegetables chopped small, or Indian-meal dough, containing no salt, so grateful to young turkeys, are *caviare* to chickens. But whatever be the bill of fare, the meals must be given at short intervals; as much as they can swallow, as often as they can eat. The reader will please to remember that when she came into the world, all that was expected of her was to grow and be good natured. She had not to provide her frock out of her mother's milk, nor to elaborate pinafores from a basin of soaked biscuit; but for poor little chickens, the only known baby-linen warehouse, is situated in their own stomachs. And, with all their industry, they are only half clad, till flesh and blood stop growing for a while, and allow down and feathers to overtake them.

The period at which they are left to shift for themselves depends upon the disposition of the hen. Some will continue their attentions to their chicks till they are nearly full grown; others will cast them off much earlier. In the latter case, it may be as well to keep an eye upon them, for a few days, till they have established themselves as independent members of the gallinaceous community. For chickens, in this half-grown state, are at the most critical period of their lives. They are now much more liable to disease than when they were apparently tender little weaklings crowded under their mother's wings. It is just before arriving at this point of growth, that artificially-hatched chickens are so sure to fail, whether hot air, hot water, or sheepskin, be the substitute for the mother's care.—*American Poultry Yard.*

PINE STRAW BRAID.—The straw of the long-leaved pine has been found to possess superior qualities for braiding. It is prepared from green leaves, scalded and dried in the shade, similar to the preparation given to straw of grain, and possesses a great degree of toughness, and is very even and sufficiently long. The braid work we have seen was a delicate light-green color. Whether it will bleach white, we are not informed.

THE FUTURE WIVES OF AMERICA.

FROM Mrs. Ellis' lectures addressed to the young ladies of England, we give the following extract, which may be read with profit by every American female, mothers as well as daughters:—

"My pretty little dears, you are no more fit for matrimony than a pullet is to look after a family of fourteen chickens. The truth is, my dear girls, you want, generally speaking, more liberty and less fashionable restraint; more kitchen and less parlor; more leg exercise and less sofa; more making puddings and less piano; more frankness and less mock modesty; more breakfast and less bustle. I like the buxom, bright-eyed, rosy-cheeked, full-breasted, bounding lass, who can darn stockings, make her own frocks, mend trousers, command a regiment of pots and kettles, milk the cows, feed the pigs, chop wood, and shoot a wild duck, as well as the duchess of Marlborough, or the queen of Spain; and be a lady withal in the drawing room. But as for your pining, wasp-waisted music-murdering, novel-devouring daughters of fashion and idleness, with your consumption-soled shoes, silk stockings, and calico shifts, you won't do for the future wives and mothers of England."

INDIAN LOAF.—To three pints of milk, add as much Indian meal as will make a thin batter, three eggs, two table-spoonfuls of butter, a tea-spoonful of saleratus, and salt to suit the taste. If not to be had, the loaf is good without the eggs.

The above recipe was given us by a fair daughter of Connecticut, and all we can say, is, if it be half equal to her gentle self, it must be good indeed.

FARMER'S RICE PUDDING.—No. 1.—Take two and a half ounces of rice, five and a half pints of milk, and four ounces of brown sugar; grate nutmeg over them and bake in a deep pan, three hours, stirring well about every 20 minutes, previous to baking.

No. 2.—To half an ounce of rice put a pint of milk, and sweeten to taste; otherwise, same as No. 1. Eat cold. A. D.

TO MAKE CURRANT JELLY.—Take the juice of red currants and white sugar, in equal weights. Stir them gently and smoothly for three hours; put it into glasses, and in three days, they will concrete into a firm jelly.

REVIEW OF PROFESSOR JOHNSTON'S TRAVELS.

NOTES ON NORTH AMERICA—AGRICULTURAL, ECONOMIC AND SOCIAL, by James F. W. Johnston, M. A., F. R. S. S. L. and E., F. G. S., C. S., &c., &c., &c.; 2 vols. William Blackwood & Sons, Edinburgh and London, 1851.—For Professor Johnston as an agricultural writer, we have always entertained a high respect, since our first perusal of his lectures on the subject of agriculture, published, we believe, in 1842. He has neither the genius or originality of Davy, nor Boussingault; but he possesses the next highest qualifications for usefulness after genius, in his habits of close observation, indefatigable industry and considerable research, to all of which, is happily superadded a cautious, discriminating judgment, in assigning due weight to the suggestions and theories of others.

Agricultural science is yet in its infancy. Its history hardly goes back for half a century. It was in the latter part of the eighteenth, where chemistry was in the seventeenth, and astronomy in the sixteenth centuries. Astrology represented the latter, and alchemy the former science, with nearly the same accuracy that the senseless apophorisms and old wives fables did the true principles of agriculture, in the respective periods mentioned. A few gifted, and many intelligent minds, perceiving the intimate relations which chemistry and mineralogy bore to the great underlying elements of agriculture, immediately seized upon the splendid modern discoveries in those two far-pervading branches of utilitarian knowledge, and at once made them subservient to the development of agricultural principles.

The period that has since elapsed, has been too brief, and the aid rendered, altogether too feeble, to develop any comprehensive, well-defined, and properly-authenticated system of original principles, which are entitled to be ranked as a science. Much, it is true, might have been accomplished within this period, had the proper means and appliances been directed to this object; but agriculture, alas, had received a bad name. Branded, like its first great follower, Cain, not exactly with the stigma of crime, but what for its well-being, was perhaps worse, as inseparably associated with ignorance and stupidity, it met with no favor from astute professors nor learned pundits. Jeered by the witty, and scoffed at by the seeming wise, it has been neglected by patriots and statesmen; and amid the munificent academical, collegiate and other beneficiary endowments of legislators, this great and paramount interest has been deemed altogether unworthy of encouragement and support. And much as they were interested in its reputation and advancement, it has not even had the cordial nor generous aid of its own followers.

As a necessary consequence of all this neglect, agriculture has had to creep along slowly, and almost by stealth. Time and chance have almost alone befriended it. There was, therefore, no little credit due for the entire devotion of mental qualities like those possessed

by Mr. Johnston, to this hitherto neglected, but greatly important and advancing interest. Though little calculated to elicit or strike out new ideas, to originate new sources of thought or new tracks of discovery, he has studiously followed up such as had been indicated by others, and by safe and cautious steps, has materially advanced us on our journey. We have carefully read what he had hitherto written, and have always admired the deliberate prudence with which every step has been taken. Indeed, we deem him one of the safest guides on the subject of agricultural principles, the present age affords.

We had hoped to find in him more than all this—a man of comprehensive research and liberality of sentiment. We had looked forward to the record of his tour in this country, with much pleasure from his previously shrewd and experienced observation. We have much to gratify us in these particulars, in the two volumes before us; yet, we must reluctantly confess, we find much, also, that has disappointed our anticipations, and diminished our respect for the ability of the author, in his character of tourist. The time spent in the United States was too short to do justice to his subject, and he has not that eagle glance, or rapid insight, that would enable him to do without it. Most of what he has recorded of material benefit to science is, the gleanings from our own accumulations, or they are not of material consequence. What is important is not new, and what is new is not important. We get more real information on agricultural subjects from a few pages of his previously published works than from both the present volumes. True, we did not anticipate a great deal of information; but there is the manner of the teacher about our author, and therefore we expect something worthy of being taught. There is a tone of superiority throughout, that leads us to expect important suggestions, and we are disappointed in not finding them. Lyell enjoyed a higher reputation as a man of science, and Lord Morpeth, (now Earl of Carlisle,) as a statesman and sagacious observer; yet, neither indulged in the occasional sneers, nor the general tone of depreciation adopted by Mr. Johnston. There is nothing but what he feels qualified to decide on, and his decisions are pronounced with the air of a master. But lest we may be thought to speak unadvisedly, we quote a few items.

In the second sentence, of the preface, we have that gross vulgarism "Britisher," under quotation, as if of every-day American use. We have often seen this phrase attributed to America by English writers. Yet, in travelling through our country within the last 30 years, for thousands of miles, in all directions, and to its remote borders, mixing in general conversation with all classes, we have not once heard the word used; and though reading much and from all sources of American writers, we have noticed it but once, and that in a scurrilous newspaper, and since the publication of the present volumes. If not of British coinage, it certainly has afforded an excellent currency for an extensive class of British writers—Marryatt, Fidler, Trollope & Co.

We must confess to a feeling of revulsion on meeting it at the very threshold of our author.

He met with "a preacher at the Episcopal church in Nova Scotia, with a nasal twang so perfect that he guessed he must be a Yankee, but was afterwards mortified to learn he was a native of New Brunswick." He need not have travelled out of England to find any reasonable number of nasal preachers, and sing-song orators. He subsequently confesses "that the general rudeness of the people, (Yankees,) which travellers speak of, is not perceptible in New England generally." No, nor elsewhere, generally, when the traveller manifests the first rudiments of a gentleman in his intercourse with them. We object to the discourtesy thrown upon the country by the *general reputation* alluded to, as if it had any other origin than in the conceit of vulgar hireling scribblers. We distrust either the intellect or feelings of a man who entertains the idea, that a nation which has given the exalted evidences of civilisation exhibited by this country, should be characterised by *general rudeness of manners*. Rude people and vulgar, we have, and in sufficient numbers, but they are not the mass; and their violence, whenever manifest, is generally aroused by aggressive qualities of the same stamp in those with whom they may come in contact.

We thank him for his hearty commendation of "the American Agriculturist and Albany Cultivator, those really well and usefully got up papers, filled with valuable information," and we hope our countrymen will not fail to appreciate them as highly.

Mr. Johnston is as great a stickler for the inviolability of language, as his almost namesake, the great English lexicographer himself, and deprecates all new meanings of words; yet he has several times used the word "wage" for wages, which we should have attributed to the carelessness of American compositors, had his volumes been printed on this side of the Atlantic, instead of an English press of scrupulous exactness, and directly under the eye of the author. We have an "unsprung farm wagon," p. 112 vol. 2; and "the northerns," for northerners sounds oddly to an American ear. What are "self-contained houses," we have not the skill to discover. The word "progressed" is used in its very worst form, on p. 439, vol. 2.

Mr. Johnston says, that at the New-York State Agricultural Show, held at Syracuse, in 1849, "nearly all the cows exhibited were Devons, and a beautiful Devon bull in the yard, had been bred in Canada." There were also a great many very beautiful bulls that were bred *out of Canada*; and as to the cows, we venture the guess, that not one in every twenty exhibited had a drop of, (visible,) Devon blood in her veins. This is of very little consequence, as are numerous other misstatements; but when one speaks *ex cathedra* he should speak *ex vero*—if authoritatively, then truly.

The fertility of the green sands of New Jersey, Mr. Johnston attributed to the presence of nodules of phosphate of lime, a conjecture we have long entertained as alone being capable of accounting for their great fertilis-

ing properties. He subsequently made an analysis which showed that *certain specimens contained from one to one and a half per cent. of phosphate*, sufficient to tell with wonderful effect on vegetable growth when associated as it always is, with an abundance of soluble potash.

We hope to find room hereafter, for some interesting remarks on the blue crystals of phosphate of iron in New Jersey, in p. 210, and his observations on *the social inferiority of the farming population of this country*, p. 471 of 2d vol. There are some valuable suggestions scattered through the work, such as the remarks on the comparative qualities of the different varieties of corn, pages 152, 154, not new, to be sure, but useful; "the nature of the rock over which the apples grow, as effecting the flavor of the cider made from them," &c. We should say the *soil* in which they grow, which is frequently totally diverse from the underlying stratum. Here is a fact of value to scientific agriculture: "I have caused an analysis of the green shale from which the soil of Mr. Geddes' farm is formed, (in Onondaga Co., N. Y.), and found it to contain 23 per cent. of carbonate of lime, and 13 per cent. of carbonate of magnesia," and yet, in this strongly calcareous soil, more lime, in the form of sulphate, or gypsum, (also to be met with in great abundance in the vicinity,) is found to be most highly efficacious. The red clays of New Jersey are also shown to be most beneficially influenced by plaster, when somewhat remote from the sea.

Many of our readers will be surprised to learn that "with all the fame and natural capabilities of this fine western region of New York, the Empire State does not, according to the best information I could obtain, produce wheat enough for its own inhabitants." His impression "that British farmers have little to fear from the wheat growers of North America, east of the head of Lake Ontario" fully accords with our own; and speaks trumpet-tongued to our farmers, that they must rely on something besides wheat, or any other agricultural products, to pay for the enormous quantities of British and other foreign manufactures we are now importing.

Mr. Johnston has very properly sifted our loose and exaggerated Patent-Office Reports, and shown the incredibility of many of their estimates and statements. But he has gone beyond any of these in his own understating of the aggregate packing business of the west, where a few emporia are made to represent the total of the states. He alludes to our recent discoveries of large quarries of phosphate of lime, both in New Jersey and Essex Co., New York. He thinks this substance may be advantageously exported to England, and if so, it is certainly most deserving of repeated and thorough trials at home.

There is a wholesome reproof administered to American grass sowers in the following: "The neglect of grass seeds may be considered as a fair indication of a low state of practical husbandry, in every country

which is blessed with a moderately moist and temperate climate. It is far too general in North America and the Provinces. Even among our home farmers, it is to be observed much more frequently than would be believed. Indeed, if we go a little out of the beaten track, we may find either in England or Scotland all the vices of American farming." So we should infer from the great number of indifferent farmers coming to us from those countries. We trust our southern brethren will take the opinion of an intelligent writer on the subject of sowing grass seed, for without the systematic introduction of a rotation of grass crops into their own husbandry, we believe the renovation of their worn-out lands to be hopeless.

Mr. Johnston ought to have supposed us a little less ignorant than he has, as he himself noticed the *fifth American* edition of his lectures. We believe there have been more copies of Liebig's and his own standard agricultural works published and read within the United States, than in England, Scotland, and Ireland together.

After considerable ingenious analysis of the taxes in this country, Mr. Johnston very rationally arrives at the conclusion, that "the *people* of the state of New York pay only one third of the taxes paid per head in Great Britain. But the *property* pays upwards of one fourth more. Thus the great contrast between the two sections of the Anglo-Saxon race on the opposite sides of the Atlantic is, on the one side the masses rule and property pays, and on the other property rules and the masses pay. The Paradise of the poor is on one side, that of the rich on the other." Since the poor are the great majority of the human race, we may well rest content, that we have a government and institutions that make our country a Paradise for them.

Mr. Johnston "was struck with the gravity and decorum with which the discussions in our New-York State Agricultural Society meetings were carried on;" but ascribes it "partly to the undisciplined and uncontrolled way in which children are brought up." *Lucus a non lucendo* is an adage that will aptly apply here. Much of the "great good that arises to the Union out of the numerous state legislatures is owing to the constant rivalry excited among them, which strives to make them outdo each other." We are thankful there is one motive efficient enough to make legislators do their duty, though we think a better, and one with equal or with greater truth might have been cited. The ignorant poor of England would have been thankful three or four years since, for as good a motive as the former, to induce parliament to vote for their public schools one half the amount it judged necessary for the repair of the queen's stables, but which, in the same breath, it denied the pecuniary ability of government to grant. There was nothing left for suffering humanity, after providing for the pampered horses of Victoria.

There is little inclination in our author to admit too much of merit in the enterprise or intelligence of "our transatlantic cousins," as he delights to call us. But maugre the frequent cuts and sly innuendos he indulges

in towards us, like most others of that heterogeneous blood, which is variously compounded of ancient Briton, piratical Northmen, Saxon, Dane, and Norman, which in modern times is self-christened Anglo-Saxon, we believe he has a most pertinacious sneaking after his claim to a relationship. But true to that soi-disant *Anglo-Saxonship*, he says, "It is to Europe not America, therefore, that is due the rapid growth of the United States—European capital, European hands, and European energy. If all the native-born Americans were to sit down and fold their hands and go to sleep, the progress would scarcely be a whit the less rapid."

The difference in the opinion of Mr. Johnston is not less marked among the females of the country than the males. "I'll go over to Canada for a wife when I marry," quotes our author from a young American farmer, when he condescends to speak of the fair sex; "and when I come home at night she'll have a nice blazing fire *on*, and a clean kitchen, and a comfortable supper for me; but if I marry a New-Yorker it'll be, John, go down to the well for some water to make the tea; go bring some logs to put on the fire," &c. Degenerate daughters of equally degenerate heroines of the revolution, behold your picture by a foreign artist! "The native-born Americans" do nothing, and their wives do even less, and this is the way that within 50 years their oppressed population of 3,000,000, has grown to 20,000,000 of affluent people, enjoying more of the comforts, intelligence, and even the luxuries of life, than any other nation of equal population that has ever occupied any part of the globe:

An amend to the American stupidity and inefficiency implied by the foregoing, is unwittingly given in relating the comforts of a winter's ride of nearly 300 miles, between a late breakfast and early bed time, giving two full hours respite for dinner in Boston, in our glorious railway carriages, which are thus contrasted with an English first-class carriage. It is in them "where the half-starved passenger would be wrapping in cloaks and rugs, that the superior comfort of the long American carriage, which, though common to 50 or 60 passengers, yet carries a stove in the centre, becomes feelingly evident." The superior elegance and luxury of our best railway carriages vindicate themselves to all who have ever tried them.

Mr. Johnston, like Dickens and hosts of other English travellers, cannot abide the neat, freshly-painted houses and out buildings that make up one of our pretty New-England villages; for, notwithstanding the good humor he had acquired by his delicious railway jaunt, on his arrival at Portland, he rails at "the white houses and new towns disguised by fresh paint; they have all so much the air of having just been taken out of a bandbox or toy seller's shop, that one is apt to see in them more signs of rapid and immediate improvement than really exists." If our fastidious European voyagers would visit some of our older and more southern towns in the Old Dominion and elsewhere, such as Jamestown, &c., we will guarantee relief to their over sensitive vision, from staring paint and too vivid evi-

dences of present thrift. They may find, too, a few instances on the other side of the Atlantic.

Our author is so inveterate an Englishman, that he frequently winds himself and his propositions up together with such an impregnable mass of facts or statistics, with the furry side towards England and the Provinces, and the burrs always towards the United States, that he cannot extricate himself; and certainly, where his ingenuity fails, we may deem it a hopeless task to attempt his relief. Thus, notwithstanding "the greater purity of British blood in the Canadas, and the consequent greater amount of energy and intelligence, we are to look for in them," he tells us that the Rochester millers go to Toronto and pay a higher price for Canadian wheat than can be afforded by these more intelligent and enterprising British subjects, who have flouring mills "much superior to those of Rochester and Oswego, and can grind flour 15 per cent. cheaper." On this they pay freight over the lake, and 20 per cent. import duty, then grind and send it to Liverpool by a route more expensive than by the St. Lawrence, and yet beat the Canadians in their own English market, with a clean 35 per cent. against them, by the author's own admission, besides all the extras, amounting in the aggregate to 40 or 50 per cent.

Of the same character as the foregoing, is another fact adduced. "The 'stumpage' charged by the government in New Brunswick for cutting the timber from a square mile of land, is 10 shillings, while in the state of Maine adjoining, it is 10 to 15 shillings per 1,000 feet; and this amounts, where the timber is good, to £800 a square mile!" In this case, both the sagacity and enterprise of the Blue Noses are at fault, for the Yankees not only get the timber from the Provinces for a mere song, but they contrive to work it up as they did the wheat, and carry it in their own vessels, which are not half so good as the Provincial, nor sailed so cheaply, though done by English sailors, and away it goes to English ports; and somehow or other, the Yankees contrive to pocket all the money, and this too, while, during all the time, the taxes against the Mainers "are in the ratio of ten to one" of those paid by the more highly favored Brunswickers. It occurs to us at this point, that on one side of the St. Croix are the unmixed descendants of the whigs of the revolution, and on the other, the tories, self-expatriated by that event from New England. The one believed there could be "no church without a bishop, and no state without a king," the other discarded both; yet, state and church have survived and already occupy both shores of our continent.

There is another little incident mentioned by the author we were not before aware of. "The shipping in St. John, (New Brunswick,) is victualled with New-England beef. Drovers of cattle from Massachusetts, make up the deficiency of supply." We have often seen large droves of cattle and sheep taken from Western New York to Upper Canada, but we had no idea that so lean an agricultural region as New England, so extensively engaged in manufactures as she is, could

yet supply the exclusively and more highly favored agricultural region of the Provinces with their beef, enjoying, too, as they do, the honor and advantage of living under the English flag.

He occasionally tells a story of a discontented Canadian, who is well-to-do at home, leaving his "domestic hearth and with his family, roaming off to the States," and after exhausting his money and patience, returning to enjoy the quiet he had abandoned. We have known a great many similar instances, with this only difference, that the emigrants did not return. These pleasant little recitations, look amazingly as if the writer were employed to paint an agreeable picture to catch the eye of the European emigrant, who is bending his thoughts on America.

Such magnanimity as the following is decidedly refreshing. "We would even be content to give up all ordinary points of dispute with our American cousins, as a nurse does to a noisy child, without any fear that his after-crowling would in any degree weaken her authority where matters of moment were concerned." He quotes "Dr. Knox and other physiologists as asserting that the Anglo-Saxon race will, and does degenerate in North America."

The recent growth of Glasgow and Birmingham are instanced as a full set off against the rapid increase of all the leading cities and towns of the Union. "Our transatlantic cousins, proud and delighted with their increase, &c., make each other believe they stand alone not merely as a rapidly progressing, but as an inately energetic people. Ninety-nine out of every hundred of those who emigrate from the British Islands, know by personal observation, little or nothing of their native country, beyond the locality in which they have been brought up, and generally nothing more than the outside appearance of that." Some credit must be due to the institutions of a country that transfers such an ignorant population into enterprising and intelligent republicans, and suddenly make them such efficient upbuilders of the lofty pillars and constantly widening borders of this vast republic. "Even writers of travels have not been exempt from the same failing. Very few know their own country sufficiently well before they begin to compare it with others." And so, forsooth, they have innocently imagined this country was advancing somewhat. But we have come to our senses at last. One man has found out the right of this matter, and we may henceforth give up our idle conceits and be content to be next to nobody, or borrow what little importance is conceded to us by the continual flood of the foregoing described immigrants.

Such expressions as "the smallest possible degree of *additional* modesty(!)" would not sit amiss even upon the New-Yorkers themselves," with the *Italic* and exclamation inclusive, do not look becoming when applied by a grave and respectable professor, to 3,000,000 of inhabitants, if the whole state is meant, and to over half a million if applied to our city alone. Nor is the remark justified even when he wishes to offset it by the vaunting editorial of a fellow countryman of his

own, who has long pandered to a depraved taste. He has come fairly down to the level of his subject, in the following choice morceau. "If anything I have said in the preceding pages might be likely to *rile* our transatlantic readers, I hope they will think we Britishers are abundantly paid by this set down of the (New-York Herald."

We are chagrined to find in the pages of a man of Professor Johnston's respectability, a quotation from Fennimore Cooper, against the character and hospitality of the people of Connecticut—a character so utterly untrue, and so contemptibly derogatory, if it were not that no American except Fennimore Cooper could indite, and no tourist but an Englishman quote. We have known a good deal of this people, and we venture the assertion, that the history of the world has never shown a state so equably and so happily poised in its political, social, and religious organisations, nor possessing more enlightened and liberally-supported benevolent public institutions. Absolute, almost unlicensed freedom is allowed to all excepting the vicious and the vagrant; a free toleration of religion; education accessible, and even compelled upon all; and with habits of sobriety, industry, and economy inculcated on every member of the community, we believe she has fewer paupers and less convictions for crime, than any other equal population. She has sent her sons and daughters over the whole earth, carrying with them everywhere the germs of civilisation and progress. We remember looking over the origin of the members, then constituting our national legislature, some years since, and though entitled to only six or seven representatives of her own, yet Connecticut furnished about thirty who had been returned from the various states to which they had emigrated. Such had been the tendency and result of the early principles instilled into them. Most of our splendid packet ships and steamers have been commanded by Connecticut sailors, and a nobler set of fellows never strode a quarter deck, every one a Nelson, save in his vanity and vices. South street is full of them; the pulpits, the bar, the bench, the professional chairs of the country everywhere contain them, and yet they are indiscriminately maligned, and without the slightest provocation, too, by an intelligent traveller, under the cloak of an "*if*" and a "*Cooper*," yet he has the candor to acknowledge he discovered no signs of these imputed traits. Could it be that the "Maryland apple toddy for a winter drink," for which the learned professor has given us a full and minute receipt, or "the mint juleps of summer," were wanting at the hospitable board of his friend, that prevented "the stranger's chance of living according to his humor, as among these jovial Middle Statesmen, (of Maryland,) which the determined temperance-upholding people of the north-eastern states scarcely permit?"

We did not know before that it is common to judge of the capacity of our legislators and horses by their avoirdupois weight, but it seems so from the authority of our author.

We are treated to the author's ideas of New-Eng-

landers in the following:—"I have already adverted to their tendency to hero worship in reference to the pilgrim fathers; and to their habit of investing these men with perfections, moral and intellectual, beyond their contemporaries, to which they have in reality no claim. Unfamiliar with the social condition of Europe in the times of the revolution, New-England writers assume that whatever superiority in mental freedom and foresight the first emigrants to North America exhibited, beyond the people at home, as a *whole*, was their own especial possession, and marked their individual superiority to those to whom they left behind. But they in reality brought with them only a few ideas, which, for nearly a century, had been fermenting in the leading minds of reforming Europe," &c. Yes, Mr. Johnston, this is just what the Pilgrim fathers did. They brought with them a few, that is, *every practical*, valuable idea that had *for a century been fermenting in the leading minds of Europe*, without the possibility of their giving it vent. Neither embodiment nor form, under any government then existing, could they give to their beautiful mental images, of "freedom to worship God." Nor could they establish equal and fair representative and responsible government; universal education; nor, finally, had they the unrestricted, inalienable privilege to establish and maintain just such social, educational, religious and political associations as they might deem most adequate to secure the greatest well being to themselves and their posterity for all time to come.

We do not claim for our New-England ancestors a distinct and original creation, as is asserted by professor Agassiz, for some of the races of mankind; nor so decided and abrupt an advancement, both physical and mental, as from a mite to a tadpole, from a tadpole to a monkey, from the monkey to an Ethiopian, and thence to a Caucasian, as intimated by the author of "Vestiges of Creation;" though we are inclined to admit the quaint and rather boasting claim of old Cotton Mather, that "God sifted three kingdoms to procure the seed for planting one." What we insist on in our forefathers is, that they were, as a body, among the most enlightened, well-educated, moral and religious people of Old England, and that it was because they were far better than the mass of Englishmen, and those who controlled the government and the hierarchy of England, that they emigrated to this country. They left a land which might have been to them, a land of abundance and luxury, and sought an inhospitable wilderness for the sake of cultivating and enjoying political, religious and intellectual privileges denied them at home. This fact, alone, would give a form and impress to their character and national organisations, that would last for ages, and which are maintained in all their pristine vigor at the present moment. The original band has since been steadily augmented by men of similar character from all nations, and especially by great numbers of intelligent Englishmen who are yet constantly resorting to our shores for a future home for themselves and their posterity; and it is most especially for this

cause, that other, and pensioned Englishmen visit this country, frequently for the express purpose of undervaluing and understating our true condition, and studying just how far they can distort the features, yet give a resemblance to the original of our body politic. We would be slow to impute such motives to Professor Johnston; yet, he seems to participate in some of these characteristics, by his frequently travelling out of his route, to pick up subjects to hang distorted views upon. How unlike the gifted, comprehensive minded Tupper, who has just left us with a soul full of thankfulness to Deity for allowing his vision to be greeted with the sight of a vast, yet newly-created people, in the enjoyment of every blessing vouchsafed to man, and who are more likely than any other on the globe, to transmit these glorious privileges through countless generations to come.

One more quotation and we have done, for we have already quadrupled the space we intended to devote to this subject. The Hudson does not please this traveller better than our people or their manners. He says, "The first 30 miles reminds one, though on a larger scale, of sailing upon one of those Dutch or Belgian canals, along which, in former days, travellers moved in the *treckschuits*, hemmed in on either hand by elevated dykes, under pretence of seeing foreign countries." The Catskill and West Point please him better; but, "on the whole," he adds, "I was disappointed with the Hudson." And so are we with Professor James F. W. Johnston, M. A., F. R. S. S. L. & E., F. G. S., C. S., &c., &c., &c., and his "Notes on North America."

THE WORLD'S EXHIBITION.

THE "Palace of Glass" is open, where multitudes of visitors are daily witnessing the industrial productions, both ornamental and useful, of all nations. Now what use is this exhibition to the farmer? The advantages are too many to be easily described. The following are a few, as detailed in the London Agricultural Gazette, the good results of which are to be looked for by the British farmer, and a hint or two may be derived by the farmers of the United States:—

"It will be an important step in the extension and progress of civilisation, if the taste of the great mass of the humbler classes from our rural districts is quickened and beautified by beholding the graceful and grand structure itself, and the eloquent sculptures, superb ornaments, and creations of the arts which are emphatically 'fine,' which arrest and fascinate our gaze within it. It will be of service to us, if, when there a friendly feeling should go out to those of other nations who have contributed to deck the resplendent avenues with these things. It will be of incalculable service to agriculturists to compare by the aid of their own eyesight, not by the help of party journals, the mechanical resources of English farmers, with those of foreign cultivators; and from the unspeakable superiority [?] of the former, receive an inspiring hope and encourage to sustain them in competition with all the world. And,

doubtless, many a farmer will this year find out some practice of distant counties, in our own land, or of other countries which may be of use to him at home; and many a one will see implements and instruments with which he was previously unacquainted, and which may comprise just the form or the motion for which he has been long seeking. And this opportunity is the greater, not only from the presence of foreign tools and machines, but also from the circumstance of the collection of those of Britain, embracing the inventions of a wider extent of country than any previous show in either England, Ireland, or Scotland. And many, also, will notice specimens of cereal produce, roots, seeds, and grasses, and of fibres, fleeces, skins, &c., which he may introduce with benefit into his own neighborhood.

"But leaving other means of advantage to be suggested by the reader's own reflection, let us proceed to notice, for the information of those who cannot witness them, some of the more worthy objects of the farmer's attention, to be found in the Glass House of Hyde Park—the great conservatory, where all the fruits of human industry have been nourished into ripeness. Entering, perhaps, into the great transept, where a strangely sylvan scene bursts upon the view—tropical trees shooting fan-like under the shade of English elms—with the high filmy arch over all, the farmer turns at once toward the department which the crimson cloths overhead proclaim 'agricultural;' and passing the rich carvings, and gorgeous adornments, the fountains, and colossal images, and the glitter of glass, gold, and fancy manufactures, threads his way between the slender pillars, till he is lost amidst the more familiar objects of farm machinery. But plows in a palace, carts, and chaff cutters in its crystal colonnades, are they not unsightly and out of taste? By no means; the implements of the field and barn are here tinted, polished, and burnished, so as to be worthy of a place beside the workmanship of fine art; and instead of the customary red, blue, black, and green paint, the colors vie with those of the nobleman's carriage, and the metal shines bright like silver, and some is even ornate with gold. No farmer dare purchase such at first, except for his drawing room; they are for ladies and princesses to admire. But when the outside gloss and brilliancy have worn off, it is certain that the utility of these machines will meet the expectations of the ingenuity which has framed them.

"On first entering this department, the eye is bewildered by a succession of steam-engine funnels, drilling machines, cutters, carts, plows, wheels, and ponderous engines, the nature of which, it requires a minute examination to understand. On each side of the main walk through this long department, are raised stands or galleries, erected by some of the principal machinists, crowded with implements and wheels, and one surmounted by an emblematic golden sheaf. On a cursory survey also appear spades, forks, &c., and many beautiful models of farmsteads and farm instruments."

Foreign Agricultural News.

By the steamer Niagara, we are in receipt of our foreign journals to the 7th of June.

MARKETS.—*Cotton* was selling steadily but with a downward tendency in the lower qualities. It was the same with *Provisions* and most other American products, except *Lard*, which has advanced from 1s. to 6d.

Flower Trade in St. Petersburg.—A fair which is held as soon as the frosts are over, and which lasts a whole month, namely, from the 25th of May to the 25th of June, is almost exclusively a flower fair; it is at this fair that the nobility and country gentlemen make their purchases for decorating their country houses to which they are about to retreat. The flowers are supplied almost entirely from Germany. We remarked the hundred-leaved and four-seasons rose, planted in a sort of hamper; cherry, apple, plum, service, and sweet chestnut trees, a few pear trees, all shrubs, and selling for double what they do in Paris; the lilies of the valley, especially, seemed to bear a most exorbitant price.—*Gardeners' Chronicle*.

Hot Houses in the Time of the Romans.—In the memoir a short time since read to the French Academy upon the subject of Roman hot houses and pits, heated artificially, I omitted several quotations which proved my statements, and they have consequently been impugned. My first authority is Columella (xi., 3, 51, 53). Tiberius being in ill health, was advised to eat cucumbers every day. The Roman gardeners cultivated these vegetables in frames, containing hot dung, and exposed to the sun in front of a wall. The frames were, moreover, on wheels, so as to be easily moved into, and continually placed in the sun's rays, and were, in addition, furnished with pieces of talc, by which they were covered at night, and by which the plants were protected from frost and cold. "Thanks to this invention," says Columella, "Tiberius was supplied with cucumbers at nearly every season of the year." Martial, (viii., 14.) the contemporary of Domitian who had in his palace a hot house, containing exotic plants, called Adonea, describes a glass hot house, belonging to one of his patrons, which was set apart for similar plants as follows in one of his epigrams:—"As you are afraid that your pale fruit trees, natives of Cilicia, cannot withstand the winter, and that a too cold wind may nip your delicate shrubs, you take care that by panes of talc the chilly wintry blast may be kept off, and that nothing be admitted but sun and a genial air; and yet, I have nothing but a miserable lodging, with a window that does not fit, and where Boreas himself would not find a habitation. Is it thus, cruel man, that you lodge an old friend? I had much rather be the guest of your tree!" The use of some heating apparatus is here clearly referred to; but Seneca, (letter 122,) tells us that the Roman hot houses were heated by steam. He denounces the unbridled luxury of his contemporaries. "Do not those live contrary to nature who require roses in winter, and who, by the use of hot water, and application of heat, compel the lily to

blossom in winter, instead of in the spring?" It is remarkable that the most direct evidence of the use of hot houses by the Romans should be furnished by a poet and a philosopher.—*Comptes Rendus*.

Decrease in the Cultivation of Flax in England.—England has never produced a sufficient quantity of flax for its own use, and the cultivation of it has decreased as agricultural improvements have advanced. It suits small farming and cottage farming, and hence the very general cultivation in Flanders and in Ireland, where the above mode of using land prevails. The preparation of the land is laborious, the treatment of the growing crop is troublesome, and the application of the produce is tedious and expensive, and any plant that needs premiums and the rewards of societies to support its use, may be suspected to want the intrinsic worth, under the soil and climate, and under the circumstances of the social system, which regulate the use and fix the value of every vendible commodity. The British cultivator will grow articles which suit his market most readily, and at the least cost, of the greater return.—*Ag. Gazette*.

Lime, or Pure Quick Lime.—This earth frequently enters into mixture with vegetable juices; it is found next to silica, most frequently in the ashes of plants, and consequently particular families and species of plants, and even the same plants according to their different periods of development, exhibit remarkable differences. The ash of several species of trees is very rich in carbonate of lime; the ash also, of many leguminous seeds is rich in this earth, while, on the contrary, the stalks of many of the cerealia, so abundant in silica, contain only a small proportion of lime. Plants of the same kind commonly contain less lime in their early growth, but a larger proportion of it in their advanced stages. Many aquatic plants, several of the Myriophylla, Characeæ, and different Algæ, during their process of vegetation, deposit lime, even in crystalline grains, upon their inner or outer surfaces, although the water in which these plants develop themselves contains only a very little carbonate of lime, which is not deposited on other organic bodies.

It appears from all these circumstances to be highly probable, that on the perfect cultivation of various plants, lime acts favorably as a virtual means of nourishment; and on the contrary, to be injurious to others: accordingly we observe that *Chrysanthemum segetum*, *Erica vulgaris*, and various species of *Carex*, become more rare when clay lands are improved by lime and marl. Mixed with soil, lime has the property of preventing the formation of the free acids, which, in wet clay lands, easily result from the decomposition of organic matter, or other process of oxidation. It renders acids already present in the soil innocuous, provided they are not in too great an amount. Particles of humus, in an almost insoluble state, have become, through its agency soluble, and converted into a beneficial means of nourishment for plants. Heavy clay soils by its means are rendered lighter, lose their too great tenacity, and acquire the property of drying up more easily.—*Prof. Schubler*.

Editors' Table.

EXCURSION ON LONG ISLAND.—A few days since, we visited Lakeland, on Long Island, and were highly gratified with the successful experiments in improving the wild lands in that neighborhood, and with the flourishing condition of all the crops on the route. In a future number, we shall recur to this subject again.

LOSSING'S FIELD BOOK OF THE REVOLUTION.—Another number of this very interesting, and to all Americans, highly-entertaining work, has been issued by the enterprising publishers, which is fully equal to those of the preceding volume.

THE QUADRUPEDS OF NORTH AMERICA; by Messrs. Audubon & Bachman. The tenth and eleventh numbers of this valuable description of American Fauna is before us. They fully equal, if they do not surpass any of the preceding numbers. They contain a lengthened description of the beaver, that most interesting of all the aquatic quadrupeds. They also treat of the badger, two species of marmots, and the Douglass squirrel, (about 20 distinct American species of these variegated lively little animals having been previously described,) the Canada otter, the swift fox, and the Texan skunk.

HARPER'S NEW-YORK & ERIE RAILROAD GUIDE BOOK, containing a description of the scenery, rivers, towns, villages, and most important works on the road, with 136 engravings by Lossing & Barritt, from original sketches made expressly for this work, by Wm. MacLeod. If the above title had added what a simple act of justice demanded, that the literary portion of the work was also got up by Mr. MacLeod, it would have been only a simple act of justice to the author. The public is really indebted to Mr. M. for much pleasing and useful information, historical, statistical and descriptive, all of which is handsomely illustrated by his original sketches.

SAND PAPER and EMERY PAPER.—Every farmer uses more or less sand paper; it is consequently important to obtain it of the best quality. E. Blanchard & Co., of New York, have recently commenced manufacturing the "Excelsior Sand Paper," which we find far superior to any we have before tried. We have a large machine shop, where we employ over 100 men in the manufacture of plows and other agricultural implements; and our mechanics, after trying all the best kinds of sand paper, give the preference to the Excelsior. The process by which it is manufactured is entirely new; the sand is of a superior grit, is laid on even, and does not shell off as is common with other kinds, but it adheres firmly to the paper till gradually worn away.

The *emery paper*, manufactured by the same establishment, is equally superior.

A HISTORY OF GREECE, from the Earliest Times to the Destruction of Corinth, B. C. 146; mainly based upon that of Connopie Thirwall, D. D., Bishop of St. David's. By Dr. Leonhard Schmitz. New York: Harpers, pp. 544; 12mo. Also, by the same publishers.

A HISTORY OF ROME, from the Earliest Times to the Death of Commodus, A. D. 192. By Dr. Leonhard Schmitz; pp. 570, to which is appended a series of

questions to the same, by John Robson. Notwithstanding the extraordinary efforts which have been made within the last half century in investigating the history of these two countries, their constitutions, laws, religion, literature, and social condition, Dr. Schmitz, the author of these volumes, has corrected many errors, or misconceptions, of other writers on these histories, and has presented the subject in a clearer light than has hitherto been done by any one previous. Both of these works are decidedly the best we have seen, and should be introduced into every private and public library, as well as into our colleges and schools.

THE BOOK OF THE FARM, detailing the labor of the Steward, Plowman, Hedger, Cattleman, Shepherd, Field Worker, and Dairymaid. By Henry Stephens, with 450 illustrations, to which are added explanatory notes, remarks, &c., by John S. Skinner—2 vols.; C. M. Saxton, Agricultural Book Publisher, No. 152 Fulton street, New York. These volumes, containing more than 1,100 pages of matter of the highest utility to the farmer, are now offered to the American public. They detail the latest and best methods of English farming, as will be readily seen by the title; yet, as we get many of our most valuable agricultural improvements from that country, it is always safe, and frequently advantageous, to take their system for our guide in the United States. The instruction conveyed in this work is more ample and complete than any that has appeared since the voluminous and expensive publication of Loudon's Encyclopedia, being much more full and elaborate than Low's valuable work on the same subject, and bringing the improvements in the practice of agriculture, down to the present moment. Besides the ordinary wood cuts, we observe several highly-finished steel plates, illustrating plans of buildings, plows, machinery, cattle, &c., which add much to the value of these volumes. We trust this interesting and instructive work will have an extensive sale among American farmers.

RECOGNITION OF VOICE BETWEEN THE EWE AND THE LAMB.—The acuteness of the sheep's ear surpasses all things in nature that I know of. A ewe will distinguish her own lamb's bleat among a thousand, all bleating at the same time. Besides, the distinguishment of voice is perfectly reciprocal between the ewe and the lamb, who, amid the deafening sound, run to meet one another. There are few things that have ever amused me more than a sheep-shearing, and then the sport continues the whole day. We put the flock into a fold, set out all the lambs to the hilt, and then set out the ewes to them as they are shorn. The moment that a lamb hears its dam's voice, it rushes from the crowd to meet her; but, instead of finding the rough, well-clad comfortable manna which it left an hour, or a few hours ago, it meets a poor, naked, shrivelling, a most deplorable-looking creature. It wheels about, and uttering a loud, tremulous bleat of perfect despair, flies from the frightful vision. The mother's voice arrests its flight, it returns, flies, and returns again, generally for ten or a dozen times before the reconciliation is fairly made up.—*Lay Sermons, by the Ettrick Shepherd.*

Review of the Market.

PRICES CURRENT IN NEW YORK, JUNE 18, 1851.

ASHES, Pot.,	100 lbs.	\$5.00	@	\$5.06
Pearl,	" do.	5.56	"	5.62
BALE ROPE,	" lb.	9	"	11
BARK, Quercitron,	" ton.	30.00	"	33.00
BEANS, White,	" bushel.	75	"	1.50
BEESEWAX, American, Yellow,	" lb.	20	"	27
BOLT ROPE,	" "	11	"	12
BONES, Ground,	" bushel.	45	"	55
BRISTLES, American,	" lb.	25	"	65
BUTTER, Table,	" "	15	"	25
Shipping,	" "	9	"	15
CANDLES, Mould, Tallow,	" "	10	"	13
Sperm,	" "	25	"	50
Stearine,	" "	25	"	30
CHEESE,	" "	5	"	10
COAL, Anthracite,	2,000 lbs.	4.25	"	5.00
CORDAGE, American,	" lb.	11	"	13
COTTON,	" "	7	"	12
COTTON BAGGING, Am. hemp,	" yard.	15	"	16
FEATHERS,	" lb.	27	"	42
FLAX, American,	" "	8	"	9
FLOUR, Sour,	" bbl.	3.00	"	3.50
Ordinary,	" "	3.50	"	4.50
Fancy,	" "	4.50	"	5.00
Buckwheat,	" "	"	"	"
Rye,	" "	3.37	"	3.50
GRAIN—Wheat, Western,	" bushel.	95	"	1.15
Red and Mixed,	" "	73	"	95
Rye,	" "	73	"	75
Corn, Northern,	" "	58	"	65
Southern,	" "	58	"	60
Barley,	" "	75	"	80
Oats,	" "	43	"	48
GUANO, Peruvian,	2,000 lbs.	47.50	"	50.00
Patagonian,	" do.	—	"	40.00
HAY, in Bales,	" 100 lbs.	58	"	63
HEMP, Russia, Clean,	" ton.	225.00	"	230.00
American, Water-rotted,	" "	160.00	"	200.00
Dew-rotted,	" "	140.00	"	175.00
HIDES, Southern, Dry,	" "	9	"	10
HOPS,	" lb.	30	"	45
HORNS,	" 100.	2.00	"	10.00
LEAD, Pig,	" 100 lbs.	4.65	"	4.75
Pipes for Pumps, &c.,	" lb.	5	"	7
LARD,	" lb.	8	"	9½
MEAL, Corn,	" bbl.	3.00	"	3.37
MOLASSES, New-Orleans,	" gallon.	30	"	33
MUSTARD, American,	" lb.	7½	"	9
NAVAL STORES—Tar,	" bbl.	1.62	"	1.87
Pitch,	" "	1.25	"	1.75
Rosin,	" "	1.20	"	1.35
Turpentine,	" "	2.44	"	3.00
Spirits of Turpentine,	" gallon.	34	"	37
OIL, Linseed, American,	" "	71	"	72
Castor,	" "	95	"	1.00
Lard,	" "	75	"	80
OIL CAKE,	" 100 lbs.	1.25	"	1.50
PEAS, Field,	" bushel.	75	"	1.50
Black-eyed,	" 2	1.75	"	2.00
PLASTER OF PARIS,	" ton.	2.50	"	3.25
Ground, in Barrels of 300 lbs.	" "	1.12	"	1.25
PROVISIONS—Beef, Mess.,	" bbl.	8.00	"	11.50
Prime,	" "	4.00	"	6.50
Smoked,	" lb.	6	"	12
Rounds, in Pickle	" "	4	"	6
Pork, Mess.,	" bbl.	12.00	"	15.25
Prime,	" "	9.00	"	13.50
Bacon Sides, Smoked,	" "	3	"	4½
in Pickle,	" "	3	"	4
Hams, Smoked,	" "	5	"	9
Pickled,	" "	4	"	7
Shoulders, Smoked,	" "	4	"	6
Pickled,	" "	3	"	5
RICE,	" 100 lbs.	3.00	"	3.63
SALT,	" sack.	1.00	"	1.70
Common,	" bushel.	20	"	35
SEEDS—Clover,	" lb.	7	"	9
Timothy,	" bushel.	2.00	"	4.00
Flax, Rough,	" "	1.60	"	1.70
SODA, Ash, (80 per cent. soda),	" lb.	3	"	—
Sulphate Soda, Ground,	" "	1	"	—
SUGAR, New-Orleans,	" lb.	4	"	8
SUMACH, American,	" ton.	35.00	"	37.00
TALLOW,	" lb.	7	"	8
TOBACCO,	" "	5	"	15
Eastern, Seed-leaf,	" "	15	"	20
Florida Wrappers,	" "	15	"	20
WHISKY, American,	" gallon.	23	"	25
WOOLS, Saxony,	" lb.	50	"	60
Merino,	" "	40	"	50
Grade Merino,	" "	30	"	40
Common,	" "	20	"	30

REMARKS.—Flour and Cotton have given way a little since our last; other articles remain at nearly the old prices.

The Weather continues cold for the season, and yet the crops generally, throughout the country, are looking well. There are partial complaints, which will always be the case in the United States, with its great breadth of territory and diversified climate.

TO CORRESPONDENTS.—Communications have been received from J. V. D. Wyckoff, S., John Robinson, G. L. S. R. Gray, A. S. M., L. F. Allen, George Campbell, and W. S. King.

Madder Sets, or Seed Roots.—Can any of our readers inform us where these can be obtained?

ACKNOWLEDGEMENTS.—The Geological Report of the Copper Lands of Lake-Superior Land District, Michigan, from Hon. William Nelson, M. C.; Report of Commissioners concerning an Agricultural School in Massachusetts; Proceedings of the Associated Agricultural Convention, held at Boston, in March, 1850; Proceedings of the Clinton-County Agricultural Society, held at Plattsburgh, N. Y., and List of Premiums for 1851.

GREAT SALE OF DURHAM CATTLE.

The subscriber will offer at public sale at Clinton Farm, near Cincinnati, on Tuesday, the 15th day of July inst., his entire herd, about 100 head, of improved short-horns, of the latest importations, as well as of the importations of 1817. Also many fine grade and native cattle of all ages and sexes.

A fine opportunity is now offered to all those wishing to improve their stock, or to commence the business.

Catalogues will be prepared, with the pedigrees of each animal, and ready by the day of sale. Terms liberal.

Cincinnati, Ohio, May 20th, 1851. SAMUEL CLOON.

Drain Tiles.—The Staten-Island Drainage Tile Company are now prepared to supply agriculturists with the above-named tiles of the most approved patterns.

2-inch round pipes, one foot in length, per thousand, \$ 9
2½ Do. Do. Do. 10
3 Do. Do. Do. 12

and pipe and horse-shoe tiles of all sizes, at corresponding prices.

The establishment is at Latourette's Point, Fresh Hills, near Richmond, Staten Island, and boats drawing four feet of water can enter the yard, and load from the kilns. Address

Jy H. R. BALL, Stapleton, Staten Island, or
E. J. DUNNING, No. 1 Bond street, N. Y.

VALUABLE REAL ESTATE FOR SALE.

I offer for sale my entire real estate, upon which are 35 sets of boxes; the most of which have only been in use from one to two years; with sufficient quantity of round trees to cut at least 20 sets more; the land upon which these are situated, is not easily surpassed by any piney lands in Eastern Carolina. There is upon the premises two distilleries neatly and conveniently fitted up, with all necessary outhouses. Upon the farm, I think the buildings altogether are seldom excelled. Those wishing to purchase are invited to examine for themselves. Terms shall be low, and payments accommodating. Come and see. Any person wishing to purchase can be furnished with a sufficient number of teams and wagons to carry on both the operations of farm and turpentine, and with a year's supply of provisions.

mar if JOHN A. AVIRETT, Catharine Lake, Onslow Co., N. C.

WEBSTER'S QUARTO DICTIONARY.

Unabridged.—We believe we shall be certain of doing a service to the people of the state, if we say a word or two upon the unabridged Quarto Dictionary of the English Language, by Noah Webster. The word *unabridged* has been purposely employed, because if such a work is wanted for any but the very lowest uses—those of mere orthography or orthoepy—it cannot be too copious and comprehensive. When one is ignorant of the proper and precise powers of a word, he cannot endure to be turned over to an abridgment that gives him a synonyme, instead of a definition; but he demands to know as much as any body knows of its history or etymology, and all its different shades of meaning. Then only can he employ it with confidence and effect, as a mighty weapon for the expression of intellect or passion.

In the vital department of a lexicon, its definitions, for which more than any and all other reasons put together, we consult such a work, Dr. Webster's stands unrivaled. Their copiousness satisfies the wants of the inquirer, and their nice analyses and acumen gratify his taste and reward research. The vocabulary is interspersed with terms in science, which it is very convenient often to have explained with promptness, without the trouble of reference to the shelves of the library.—*Newark Daily Advertiser*, of March 25th, 1851.

A Dictionary is the last book which a scholar ever wants to have *abridged*, the process being sure to cut off the *very matter which he most values*.—*Chronotype*.

Published by G. & C. MERRIAM, Springfield, Mass., and for sale by Booksellers generally. Jy 11

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gold and silver pen and pencil cases, ivory and tortoise-shell holders, and patentees of the celebrated extension cases, No. 189 Broadway, New York. ju 11

FOR SALE, by private contract, a charming Farm at New Rochelle, Westchester County, New York, containing about 30 acres of arable meadow and pasture land, of profuse and inexhaustible fertility, with several captivating building sites. Situated in the most delightful part of the beautiful village of New Rochelle, about five minutes' walk from the celebrated Neptune House, and within one hour's ride of the city of New York, this luxurious little farm presents one of the most enchanting rural retreats that the whole country affords. The greater portion of the land, unsurpassed in natural fertility, is also in the highest state of cultivation; a farmer's dwelling, convenient barn, stable and out houses having been erected for this purpose within the last three years. A brook of the purest water, unfailing in the driest season, runs through both the arable and the meadow fields, and might be made to supply a fish pond, at a trifling expense. A particular part of this property, containing about five acres, deemed pre-eminently admirable for a tasteful dwelling house, remains uncultivated, with much of its natural growth of shrubbery. It is so beautifully undulated by nature, as to render it immediately available for ornamental grounds and domestic gardens; and it is directly accessible from the Old Boston Road, to which it is contiguous, by a short avenue already opened and fenced. This exquisite spot commands a noble view of the glowing waters of the Sound, along the shores of Long Island, to Glen Cove, for a distance of nine miles, and of several finely wooded points and islands, in closer vicinity. And even the inland view, though less extensive, is of a richly-rolling character, picturesque with woodland heights, pleasant residences and lawn-like fields. Several new mansions, villas, and cottages are erecting in the neighborhood, which is annually augmenting in public favor, as a place both of residence and of fashionable resort. Indeed, its very eminent salubrity, its facilities for sea bathing, fishing, shooting, and other rural sports, together with its now almost imperceptible distance, by railroad, from New York, must rapidly enhance the value of every eligible spot it contains.

That a purchaser of the above property, which contains more than one building site of surpassing eligibility, could dispose of it in separate parts, with immense advantage, admits of no doubt, and would be evident from the most cursory inspection. The title is indisputable; and the whole will be sold at a fair price, upon accommodating terms. The crop now in the ground, valued at about \$500, will be sold with the premises, if desired. For further particulars, and a view of the premises, apply to
CAPT. LEWINT, New Rochelle, or to
J. M. BALDWIN, Esq., 20 Nassau st., N. Y.

11

LANDS ON LONG ISLAND, adjoining the villages of Lakeland and Hermanville, about 48 miles from the cities of New York and Brooklyn, by the Long-Island Railroad. The opportunity is now offered to all those who ever wish to obtain land on Long Island, the ancient "Garden of America," that will probably never occur again; for these lands are the only remaining new lands on the island, and are equal in quality, when cultivated, to any other land.

The results of cultivation on these island lands have been so great, so much beyond the expectations of any one, that they are now considered of great value for farms and gardens, and will, in all probability, be all taken up for settlement and occupation, or be held at more than five times their present price. All kinds of produce may now be seen growing there, such as wheat, rye, corn, potatoes, and garden vegetables, with fruits and flowers, in the most luxuriant growth, where but a short time since, the land was covered with trees and bushes.

The surface of the ground is perfectly beautiful, free from stone, bogs, or marshes, and the climate as healthy as can be found in this latitude. The soil is a fine loam, admirably adapted to high cultivation and great crops, and of easy tillage.

Indeed, no New-England nor northern New-York man can form any adequate idea of the difference in the labor and strength requisite to cultivate these island lands, and that required to subdue their own rugged lands, until he has seen or made the trial; and I now offer for sale as handsome land, and intrinsically as valuable, as can be found within 50 miles of the city of New York, in any direction, in lots of five acres or more, for the sum of \$25 per acre.

Any person wishing to purchase a five-acre lot of good and handsome land, without one foot of water or useless ground on it, can do so by sending \$10 as a first payment, and a further sum of \$10 a month until half is paid, when a warranty deed and good title will be given, and the remainder part of the purchase money may be paid or secured on the land, to be paid within three or five years, with 6 per cent. yearly interest. Larger lots will be sold on the same terms.

The title is perfectly good. I have a history or deduction of the title complete, certified to by legal men of the highest character, which I will send by mail, with maps, pamphlets, and all information to all purchasers, or those who wish to be informed of these island lands, by applying to
11

11

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may 3t A. S. BABCOCK & Co., Albany, N. Y.

PATENT ZINC PAINTS.—The Zinc White Paint is rapidly superseding white lead, over which it possesses many advantages. It is whiter and more beautiful than white lead—does not turn yellow, even when exposed to sulphurous vapor, has no smell, is not injurious to health, and is really cheaper, as it covers more surface and is more durable. This superior zinc paint is kept constantly on hand, both dry and ground in oil.

ZINC BROWN and BLACK PAINTS are both weather and fire proof—the best covering for outside work ever introduced; adapted to buildings of wood, brick, or stone; fences, carriage bodies, bridges, and machinery; the hulls of vessels, anchors, chains, and all other iron work on board ship; Steam boilers, smoke stacks, and water tanks; iron, tin, and other roofing, iron, shutters, doors, and railings, wire fences, &c. For iron surfaces, this paint is especially valuable, as it forms a galvanic connection, and entirely prevents rust. May be had both dry and ground in oil.

In preparing these paints for use, when dry, they should not only be slightly mingled with oil, but thoroughly worked in with as little of it as may be necessary to give the proper fluidity, when they will cover well and give entire satisfaction. When ground in oil, they are treated in all respects like white lead.

Dealers supplied by S. T. Jones & Co., general agents for the New-Jersey Exploring and Mining Co.'s Patent Zinc Paints, No. 53 Beaver street, New York. ju 6m

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The subscriber has a number of yearlings and two-year-old bucks which he will sell any time when called for, and has no hesitation in saying this breed of sheep is superior to all others for large carcasses, heavy fleeces, early maturity, and constitution, and defies competition with all other breeds for profit. This flock, (which has been bred from some of the best ever imported,) is so well known they need no further description than to say that the sire clipped 18 pounds of washed wool, and weighed 361 pounds alive. Gentlemen are invited to call and see for themselves, or communicate by mail. Direct to
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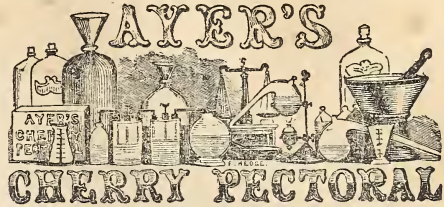
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Brunswick, Maine, Feb. 5th, 1847.

From an Overseer in the Hamilton Mills, in this City.—Dr. J. C. Ayer: I have been cured of the worst cough I ever had in my life, by your "Cherry Pectoral," and never fail, when I have opportunity, of recommending it to others.

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Read the following, and see if this medicine is worth a trial. This patient had become very feeble, and the effect of the medicine was unmistakably distinct:—

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Prepared and sold by James C. Ayer, practical chemist, Lowell, Mass., and sold by druggists generally. ju 3t

MORGAN HUNTER & MORGAN CHIEF.—

Morgan Hunter will stand the coming season, at the stable of S. A. Gilbert, in East Hamilton. Terms \$10, to insure. This fine horse is seven years old this spring—was bred in Springfield, Vt.; got by Gifford Morgan, dam by the same horse; thus possessing more of the blood of the Gifford Morgan, than any other horse now living. For portrait and description see page 195 of the current volume.

Morgan Chief will be four years old on the 18th of this June. He is a very superior colt—was got by Gifford Morgan, dam by Green-Mountain Morgan. He will stand at the stable of H. R. Ackley, East Hamilton. Terms \$10, to insure. See Cultivator for 1849, page 67.

ju 2t

ACKLEY & GILBERT,
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This splendid Colt will be kept at the stable of the subscriber the coming season, for a few mares only. Young Gifford will be three years old this June; was bred in Walpole, New Hampshire, by F. A. Wier; in color, chestnut—got by Gifford Morgan, dam by Sherman Morgan, thus possessing the blood of two of the best Morgan stallions on record. In color, form, and action, he closely resembles his illustrious sire. Terms \$10 to insure. For description, see Cultivator for 1849, page 67. Good pasturage furnished; accidents and escapes, at the risk of the owners.

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TOBACCO, OIL AND SEED PRESSES, made on progressive principles, to take the place of the Hydraulic press. These are much more efficient than the latter, at the same time they are more economical. Their superior merits have been recently satisfactorily tested by several large oil manufacturers in this vicinity, where the machines may be seen in operation.

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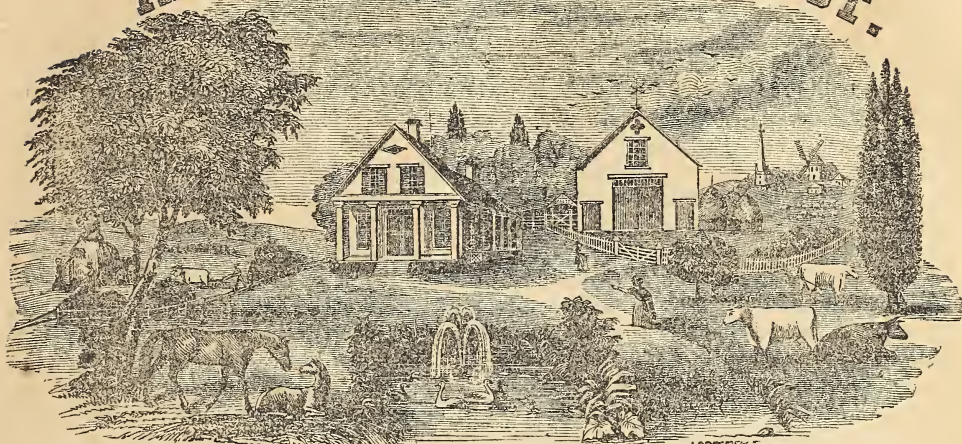
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AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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THE TRAVELLER.—No. 6.

ONE of the most improving planters in the vicinity of Tallahassee is Col. Robert W. Williams. His plantation, on Lake Iamonee, twelve miles north of the town, is successfully side-hill ditched, and that is more than can be said of many others. He has more improved plows and other tools, and saves more manure, oyster shells, and bones, than any other man I know of in Florida. He is laughed at by his neighbors, as a theorist, experimental book farmer, &c.; but they are glad enough to follow him in everything that is successful. It is easy now to procure good plows of the merchants, or other agricultural implements from your New-York Agricultural Warehouse; and yet, few are aware how much they are indebted to Col. Williams for what he has done in the way of introducing such things into Florida.

There are many other persons and things which I shall notice hereafter, in this "land of promise." At present, being a traveller, I must travel on, merely giving the very pleasant town and people of Quincy a passing remark. The location is about as handsome as could be desired; the surface gently undulating, sandy-loam soil, and being surrounded by deep hollows, requires no artificial grading. These hollows abound in springs and excellent sites for the hydraulic ram. One of the staple products of this, Gadsden county, is Spanish tobacco. It is grown in several places in Florida, principally from Cuba seed, and is in high repute among cigar makers for wrappers; it is more handsomely spotted than the same article grown in Cuba. The first quality is grown exclusively upon new ground, the first year after clearing off the timber; in fact, it will not spot upon old ground, and besides, the leaf grows thicker, and not so suitable for wrappers. Not more than one acre can be planted to the hand, such is the immense labor of cultivating this crop, principally owing to the unceasing task of keeping it clear from worms. An average crop is 500 pounds, and the average price about 22 cents a pound. The second year's crop is heavier but less valuable, while the third year will not pay, on account of the great labor of keeping it free of grass. One gentleman told me he had made \$600 a year, to the hand, out of his tobacco and other crops, as the tobacco does not prevent them from raising corn, and part of a crop of cotton in connection with it. The crop is mostly sent to New Orleans, for sale.

February 22d.—When I left Quincy, the oak trees were putting on spring foliage, and the

wild jasmine filled the roads with fragrance from its beautiful flowers of gold; farmers were planting corn, and the few who ever think of such small matters, were busy putting garden seeds in the already warm earth. If Quincy could be easily approached, and had only a decently comfortable hotel, it would become a great resort for invalids during winter. From there to Chattahoochee, 22 miles, the road I found passing nearly all the way through pine woods upon a pretty level ridge, until near the river, where there was an awful hill, down which I risked my neck in a crazy old coach, and dark night, just to get an idea of the elevation of the table land behind. If the traveller expects to find the town of Chattahoochee, he will be slightly disappointed. It consists of a tavern, store, warehouse, and such other out buildings as can be crowded upon a little mound of about a quarter of an acre rising out of the overflowed swamp, serving for a ferry and steamboat landing for a great extent of country. A delightful summer residence it must be for the full enjoyment of hunting alligators, fighting mosquitos, and shaking off the ague.

It was my intention to visit Mariana, and return here to take a boat up to Columbus; but finding some ladies and gentlemen who had been waiting five days, I determined to join them upon the very first, which luckily arrived a few hours after I did. As I had no desire to risk so long a waiting upon such circumscribed limits, I hope my friends in Mariana will accept this as my excuse for not keeping my engagements.

The cotton lands upon the lower part of the Chattahoochee River are broad and low, and subject to inundation every year. A few miles above Flint River, on the west branch, there is one small, rocky point which is almost the only one above high water to be seen in a whole day's sailing.

February 23d was like a balmy May day; the early trees along the river as green as summer, while azalias and jasmine flowers lent a delightful fragrance to the air as we wound along the rich alluvial shores, a great portion of which are still in forest; for, notwithstanding the temptation of the rich harvests this soil yields, with little preparation and cultivation, the miasma is as abundant as any other product.

We left the low bottoms at close of day, and during the night, passed Fort Gaines and Eufaula, where the clay bank rises 160 feet, a considerable portion of it perpendicular from the water. Warehouses with unboarded sides, ten or twelve

stories high [?] built in the side of these bluffs, present a singular appearance, when lighted up by the glare of half a dozen brilliant light-wood torches that are flashing a glad welcome to the approaching steamer, in the hands of that everjoyous set of beings, the negroes, whose happy and contented faces and cheerful glee, always adds a charm to a night landing upon a southern or western river.

During all the 24th, we were sailing between some of the finest plantations upon this rich river. The Oswichee Bend, formerly owned by General Hamilton, has lately been purchased, with some 280 servants, by Mr. Wright, of Cheraw, South Carolina. The price, \$140,000, is considered low. The last crop sold for \$22,000. I believe there are about 3,000 acres of land, including the hills, though a thousand acres, more or less, is not considered in sales of this kind; the number of servants and number of cotton bales produced, is the criterion of value.

Average Crops upon Bottom Lands.—Judge Mitchell, of Columbus, whose plantation is on creek bottom land, 30 miles from that town, on the Alabama side, told me he averaged from 1844 to 1850, 2,100 pounds, (five and a quarter bales,) to the hand, making at the same time a full supply of corn and pork. As he is considered a first-rate planter, this may be taken as a full average yield of the bottom lands of this river for a series of years.

Chattahoochee Cotton Lands.—These are ranked among the best in the United States. General Abercrombie is one of the oldest planters on the Alabama side below Columbus, having settled there in 1835; his crops may be taken as a pretty fair specimen of the capability of productiveness under ordinary cultivation. He works, now, 40 hands all told; say 30 full ones, and plants 300 acres of cotton, and 250 of corn, besides considerable quantity of oats, some wheat, potatoes, turnips, rice &c., and makes all his own meat, and a little to spare, and sells corn. His cotton has averaged, per year, 1,000 pounds in the seed, to the acre, and five bales to the hand, and six cents a pound for price. He plants corn the middle of March, in the bottom of water furrows, between four-foot beds; first running a subsoil plow. Plants cotton middle of April, four to six feet between rows. Never burns cotton and corn stalks, nor wastemanure, although the land he cultivates is the very finest kind of river bottom. Says he keeps too many cattle, and is convinced that he might buy more pork with the corn consumed than it makes.

Columbus.—What traveller has ever visited this thriving, go-ahead town without feeling proud of the enterprise of his countrymen? I could not say all I might of this place, in a whole number of this paper. Many wealthy citizens of Columbus have dwellings out upon the hills near town, where they enjoy the fresh air, amid beautiful grounds, shade trees, shrubbery, and pleasant gardens. Among these, are Col. Chamber's, Dr. Wildmon's, Messrs. Hurt's Flournoy's, Woolfolk's, Mitchell's, and others' of our friends and subscribers.

Mr. Charles A. Peabody, one of the editors of "The Soil of the South," the most successful strawberry culturist in the world, lives on the Alabama side about five miles from town. Several very large cotton and other mills, occupy a small portion of the immense water power of this place.

Columbus is 350 miles above Apalachicola, its natural seaport, and 200 above Chattahoochee, a passage of two days and one night. Fare, on a good boat, \$7.

March 6th.—To Barnesville, 70 miles—\$7 by stage—roads such as every traveller remembers with the same feelings the boy did the whipping, awful while it lasted—very glad its over with. Here I took good cars to Atlanta, 62 miles, upon one of the excellent railroads which abound in Georgia.

Atlanta is a sort of Jonah's-gourd city, which has grown up entirely within five years. It is at the northern terminus of the Central Railroad from Macon, 101 miles, the western terminus of the Georgia Railroad, from Augusta, 168 miles, the southern terminus of the State Railroad, from Chattanooga 138 miles, and the eastern terminus of a new road not yet quite completed to West Point to join the Alabama road. It is already a place of note, but will be more so, for it holds a few men of the right sort to make any new town go ahead rapidly. One of the most prominent of these, is R. Peters, who was educated for and practised civil engineering many years, but is now one of the most improving farmers in Georgia. He has done more than any other man in this part of the state to introduce all kinds of improved stock. His favorite cattle, after a fair trial of several breeds, are the beautiful Devons. How much a new country is indebted to such men, is never fully appreciated. Mr. P. and his partners have built a very superior steam flouring mill here, which is not only a convenience, but an ornament to the place. Unfortunately, the wheat crop of '49 and '50 were so cut off they have been grinding

wheat from New York for the supply of the country.

Near Atlanta, resides Mr. J. V. Jones, who has lately become somewhat celebrated as the grower of a remarkably fine quality of upland cotton of a very long staple, upon his plantation, in Burke county. It is known as Jethro cotton, and is well worthy the attention of all planters. This part of Georgia is noted for the salubrity of its climate. The soil around Atlanta is not first quality, except for fruit. Apples are abundant. Mr. Peters is experimenting, which will be the best grass to cultivate, as that is only lacking to make it one of the very best wool-growing regions.

Stone Mountain is an object, which attracts the attention of all travellers, a few miles after leaving Atlanta, on the road to Augusta. It is an immense mass of naked granite, standing up out of the comparative level around, like the great pyramids of Egypt. It is a land mark that will endure forever. If it had been a lime rock, it would have been more valuable to the agriculturist; for all the lands along this road would be wonderfully benefitted by an application of calcareous matter. In sight of this great natural curiosity let the traveller rest.

SOLON ROBINSON.

PORK—BACON—HAM.—No. 5.

No animal yields so little mere offal as the pig, every part being made useful—feet, head, and shanks are all admired when pickled or made into "brawn." The poor man makes a comfortable meal of the pluck and part of the caul; the large intestines and stomach are sold under the name of "chitterlings;" the small intestines envelope sausage meat; sausage meat itself is formed from the scraps; black puddings are made from its blood, the bristles are appropriated by the brushmaker, every part is turned to account, so much so, that we cannot be surprised at the hog being so long continued a favorite at the farm house, particularly when we take into consideration the valuable property which his flesh possesses of being easily preserved for future occasions by means of salt.

In noticing the curing of bacon and pork, it is barely requisite to mention the curing of pork for the navy, the cutting up of which requires some practice, as every piece ought to weigh as nearly as possible alike, with an equal amount of bone. When cut up, it is thrown into large tubs containing a preparation of strong pickle, formed of salt and saltpetre; when cured, it is put into barrels, the bottom of the cask being cov-

ered with a layer of bay salt, then a layer of pork, another layer of salt, and so on alternately until the cask is nearly filled; then a layer of salt is laid on the top, and the cask headed up. The fresh pickle out of which the pork has been taken is then saturated with salt and poured through a hole left in the head of the cask for the purpose; when the cask is full, the hole is plugged up and the cask sent to market. Porkers cured for the home market, and usually known in the metropolis as barrelled "Berwick pork," is cured by being cut up into pieces and salted in tubs, having no other brine than that formed by itself in pickling. It is, when cured, taken out, packed in barrels along with fresh, strong pickle, and sent to market. A large quantity of the Berwick pork, sold in London, comes from the west of Ireland. For home use, pickled pork may be made, using a little sugar in addition to the salt, by which means less of the latter may be used. By this mode, the pork is not quite so salt; as, however, pickled pork is always preferred when made from pigs of moderate size, it is better to make the same as wanted, and not to keep it more than a month or six weeks; for prepare it in whatever way that can be devised, the flesh of young pigs will contract very much in the pot, if long cured, and in cooking, care should be taken not to over-boil it, otherwise it will also contract.

All sorts of recipes have been given for curing ham and bacon, some representing the mode of one country, some of another, overlooking the fact that almost every country or county adopts varied means, and do not confine themselves to any particular rule. If half a dozen farm houses in Westmoreland and Cumberland, who practise curing bacon on an extensive scale, be asked for their recipes, three or four different ones will be given; in fact, the mode of curing is most empirical, every curer adopting a formula of his own. If any book treating on swine and curing bacon is taken up, it will be invariably found that sugar or molasses enter into the reputed recipes of most of the celebrated districts. Now, the writer knows from actual experience, and from having been witness to the curing of bacon and hams in the west of England, Cumberland, Westmoreland, and Ireland, in the latter country where both York hams and West-of-England bacon is made up for the English market, and sold as such in England, (one curer of York hams in Ireland sending almost the whole of his make to Hull and York,) that no sugar nor molasses enters into the process of curing where the business

is carried on to any extent. In Cumberland and Westmoreland, it is customary, when the hams are sufficiently cured, to mix up a species of pomatum formed of lard or fat, black pepper, and sugar, and rub this over the bottom of the ham, but more particularly around, and over the end of the bone, filling the crevices well up with this substance; the principal effect of which is that it excludes the air, and consequently diminishes the chance of decay from ordinary causes, and the pepper decidedly prevents the fly converting it into a nest. With careful persons, the ribs, bony parts, and joints in bacon are treated in a similar manner; the sugar and pepper have also the effect of giving the ham and lean parts of the bacon so treated, an additional fine flavor. The only place where I have known sugar much used in curing bacon is in some parts of Essex, where I have tasted it quite sweet with sugar. The fine flavor of the Westmoreland and Cumberland hams is principally due to the fact of their being fed on oat meal and buttermilk, and not to the mode of curing.

Another important fact is, that, whilst firm, well-fed hogs absorb less salt than ill-fed animals; in fact, though as much salt is used with the former when perfectly cured will be by no means so salt as the latter, although like means are used in each case, and continued in pickle or salt a like length of time, and the reason is obvious from natural causes. There is not much fear of well-fed, firm hogs becoming over salt in curing, unless great excess of salt and saltpetre are used for the purpose, or kept preposterously long in salt. In whatever form the flesh of hogs is intended to be disposed of, it is requisite that food should be withheld from them for at least 16 or 24 hours prior to their being slaughtered; and if they have previously been driven, they ought to have a rest of three or four days before being killed; for if killed when in a nervously excited state, or incipient fever, arising from over driving or hot weather, the meat will only with difficulty "take the salt."

The state of the weather is a matter of great importance in curing bacon, warm and very moist weather being extremely prejudicial. Hot weather is not so injurious as is generally imagined, provided, the atmosphere is dry. As, however, the atmosphere is generally charged with moisture in proportion to its high temperature, the hurtful effect which frequently follows curing during the summer season is attributed to heat instead of the true cause, namely,

excess of moisture in the atmosphere, the baneful effect of which is heightened by its higher temperature, to which may be added the feverish condition of the animal at such seasons; if within the curer's power, his operations ought to be regulated rather by the hygrometer than by the thermometer. This is, however, difficult to accomplish, as hogs should fast 16 hours before being slaughtered, after which, they require to be hung up to cool 16 or 20 more, at least 36 hours must elapse before the sides are fit for the curer. In our variable climate, many changes may occur within that period. Severe frosty weather is not otherwise unfavorable to curing bacon than that which arises from the circumstance that it will not "take the salt" at all, but remains quite fresh, until a thaw comes on, when it takes the salt rapidly.—*Jour. Royal Ag. Soc.*

GOTHS AND VANDALS vs. SHADE TREES.

SOME simple readers of history suppose this class of people only existed in Europe; that they never overrun America as they did Rome, carrying the besom of destruction in their front rank wherever they march, and leaving their foot prints of fire, to show they have performed their office faithfully, of cutting down and committing to the flames every fine old tree of age and beauty they can lay their poisonous fangs upon.

I have seen within a few weeks past, in the vicinity of a great commercial town, the stumps of a hundred noble old roadside oaks that had just been cut down for no other object than the fuel, unless it was the gratification of barbaric pleasure to the Goth who ordered their destruction. I have also just been reading an article in the "Western Horticultural Review," published at Cincinnati, which designates this as the age of destruction, while speaking of the wanton wickedness of the way the Goths in the vicinity of that city are sweeping off all the glorious old trees that have beautified and adorned the hills which surround that great town, and which afforded me such cooling shades in days of Auld Lang Syne, where I used to recline with book or pencil in hand, looking down upon the busy hum below. No wonder, the writer alluded to, calls it the age of destruction, when he looks out upon those old hills during the burning days of summer, and sees them stripped of their ancient oaks by a spirit of Vandalism, that would blot out every line of beauty from the face of the earth for a little immediate gain. It was such a spirit that doomed to de-

struction a few months ago, one of the oldest and most beautiful spreading trees that ever lent its cooling shade to a lovely nook by the seaside, because, as the owner said, "a down-east chap offered \$15 for the confounded old thing, and I thought 'twould give us a better view, and so I let him cut it."

'Twas a noble old oak spreading wide by the sea,
Where the breezes came cooling and fresh o'er the lea,
While the dark waving foliage gave strength to the shade,
Where a thousand deep vows Indian lovers have made;
For the noble old oak spreading wide to the breeze,
Like a vet'ran hath wintered long ages 'mong trees,
And hath witnessed the fading and passing away,
Of a nation of people God doomed to decay,
While destroying the oaks that o'ershaded the lawn
Comes a nation more ruthless than the red one that's gone.

Ruthless indeed—a perfect barbarian—who for the value of \$15, would cut down such a wide-spreading and delightful shade tree, that might have stood another century, and during these hot July days, would afford such a delightful retreat from the brick walls that sear and scorch me as I write this denunciation of the Goths and Vandals of America. SOLON.

EXPERIMENTS WITH FRESH AND COMPOST MANURES.

LAST year, I applied to two pieces of land compost and fresh manures from the sheep yards in proportion of six of the former to seven of the latter, and planted each with Indian corn. The culture of both was similar, and that to which the compost manure was applied, produced full one fourth the most to the acre. The piece which gave the smallest return, before manuring, was considered to be in a higher state of cultivation. [What was the compost?—Eds.]

After placing the increased quantity of manures with the evident increase of the crop, against the expense of composting, I concluded to make another trial of composting this season, and have again applied it to the corn crop. The query now is, Which will produce the most lasting effect, the fresh or the compost manure? The produce of future years may turn the scale.

Salem, N. Y., June, 1851.

S. R. GRAY.

CHEMISTRY OF MILK.—No. 2.

I HAVE shown in my first number what the normal composition of milk is, and how it differs in different animals. It will be observed that there are considerable differences in the proportions of its elements in different species of animals; still, the elements are the same. The milk of carnivorous animals, or the flesh eaters, is the richest, and that of the ass the poorest, or rather most watery. That of the human female is also poor, both as to casein and butter,

but is rich in sugar. The milk of the goat does not differ essentially from that of the human female. Milk, it will be seen, contains three important elements—butter, cheese, or casein, and sugar. But these elements differ in their proportions as well as in the amount of milk given in different individuals, even while in health, and while fed upon the same kind of food; which is agreeable to experience. This, however, is not only true, but it is found to be true also, that the same individual gives more or less milk according to the state of her health and the character of the food with which she is supplied.

To determine the extent of these variations, I fed a small Dutch cow with different kinds of food during two or three months of the fall and winter of 1850. She was five years old, and her live weight, in November, while feeding upon grass, was 890 pounds. Her calf, which was then seven months old, weighed 348 pounds. The cow, on being put up to hay, ate from 21 to 27 pounds per day, of good hay. The average amount of hay per day, for one week, in December, was about 22 pounds, she having consumed 155 pounds. The water drunk during the same period, amounted to 238 pounds, 12 ounces, or a little over 42 pounds per day. The solid excrements weighed 399 pounds, 8 ounces, or a little over 44 pounds per day. Her calf was supplied with the same kind of rations and ate, during the same period, 85 pounds of hay, or about 12 pounds per day, and drank 120 pounds, 12 ounces of water, or about 17 pounds per day, and made 144 pounds, 12 ounces of solid excrement, which is equivalent to 20 pounds per day.

A large horse consumes 31 pounds of hay per day. The weighed solid excrement amounts to 82 pounds, 8 ounces for the same period. A large proportion is water of course, and it seems to follow that an animal fed upon dry hay requires sufficient water to supply what the grass has lost in drying, in being changed from grass to hay.

To prosecute successfully a series of experiments upon the value of different kinds of food for the production of milk, it is necessary that the cow should be gentle and composed. One which is restless and of a nervous temperament will be impatient under confinement and give uncertain and unsteady results; or one which is naturally wild will be a bad subject, and her milk will vary not only in amount but in quality, also; trivial circumstances will cause results which will vitiate our conclusions. It is well known to physicians that the quality of the

milk of our own species is remarkably changed by circumstances. Moral considerations are especially operative; thus fear, anger, or a sudden fright has changed the character of the secretion to that extent, that death has followed from its use; or the infant has died from its effects in a few moments. The cow possessed the requisite qualities to fit her for the experiments I had in view. She is docile and gentle, easily milked, though not at all remarkable for the quantity she gives, yet its quality is remarkably good for a common cow. I think, too, that her system feels at once the influence of food, and that it is not lost in unproductive matters, but that it is expended in keeping it warm, and supplying nutriment to a system which does not waste itself excessively in an activity of those organs which are immediately concerned in producing excrementitious matters. Physiologists do not all agree, however, in regard to the effects of food in producing milk. Boussingault maintains that it is not essentially affected by the kind of food upon which the animal subsists, provided each kind of food is furnished in equivalent proportions; or which is about the same thing, provided the poorness of the food is made up in quantity.

The experiments of Professor Thompson, however, do not seem to support this view; and my own experiments corroborate those of Thompson. This view is also that which we should naturally adopt. The milk being derived from the food, must, it would appear, be influenced by it, both in quality and quantity. Roots and tubers, if fed by themselves, will rarely agree with the subject; and although an exact equivalent of roots and hay may be fed to the cow, yet the effects upon the secretion will be quite different. Milk is not a substance which is created, but rather one which is compounded of pre-existing elements. If there is a deficiency of one element in the food, as casein, for instance, we may infer with every probability of truth, that the secretion will be deficient in that element. Some kinds of food will make more cheese than others; some pasture lands of this state, all things being equal, will make more and better butter than others; yet it should not be forgotten that the room in which the milk is kept, will greatly influence the quality of the butter. But there is undoubtedly a limit to the influence of food upon the quantity and quality of milk. This limit is determined by the gland, the organ of secretion. The capability of the gland is constitutional, its capacity is determined by growth, or devel-

opment. It is an individual organ and is gauged, as it were, by constitutional peculiarities, and any increase of food beyond a certain amount cannot furnish a proportional increase of milk by atoms of increment. An attempt to override a constitutional law will not be successful, and perhaps not perfectly safe. The object which the farmer should have in view, is, to keep the animal up to her constitutional capacity.

E. EMMONS.

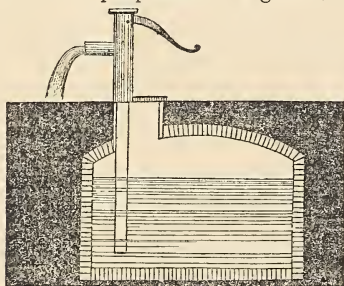
LIQUID MANURES.

WE are permitted to copy into the *Agriculturist*, the following valuable article on the subject of liquid manures, from the "American Muck Book;" treating of the nature, properties, sources, history, and operations of all the principal fertilisers and manures in common use, with specific directions for their preparation, preservation, and application to the soil and to crops; drawn from authentic sources, actual experience, and personal observation, as combined with the leading principles of practical and scientific agriculture. Illustrated with engravings. By D. J. Browne. This work will be soon issued from the press of C. M. Saxton, the enterprising Agricultural Book Publisher, 152 Fulton street, and we do not hesitate to say that it will be found the most full and complete treatise on manures, both solid and liquid, ever yet given to the public:—

The construction of the best and most convenient form of a tank, and a suitable apparatus for the collection and application of liquid manure, in the most cleanly and economical manner, is a subject of great utility, and one which has more or less occupied the attention of the most eminent agriculturists in various ages, and in all civilised countries of the globe.

The chief faults in the arrangements heretofore made for the purpose of collecting liquid manure, appear to have been that, the tanks, in some instances, received the urine alone, while the drainings of the barn yard and manure heaps were allowed to escape; or that they formed a receptacle for the rain water from the adjoining buildings, as well as in the urine, by which the liquid manure was much diluted, and consequently an increased expense in applying it; while, in other instances, the compost heap was at too great a distance from the tank, and hence, inconvenience was experienced in impregnating the compost when necessary. A mode by which these disadvantages would be obviated, and what appears to be an efficient system of collecting the drainage from the stables, farm yard, manure heaps, &c., is as follows:—

First, let a site be fixed upon for the manure tank, on the northerly side, if convenient, and behind the buildings of the yard; the tank being made of bricks, laid in cement or hydraulic mortar, and covered over, as indicated by fig. 48. A scuttle, or "man hole," should be constructed in the top, to allow a person to enter, to clear out the sediment which is liable to collect. The size should be regulated by the stock usually kept in the stables or sheds. Into this tank, all the urine from the stables, stalls, &c., should be collected, by means of drains communicating with each, as well as with the barn yard, which should be made a little concave in its bed, so that no portion of the liquid manure may be allowed to escape. A channel should be made around the compost heap, which should be close by, so that the drainage from it may be collected in the tank. All the farm buildings should have gutters or spouts, which should be so arranged that the water running from them may be conveyed away by a drain, or collected in cisterns for the purposes of irrigation, diluting

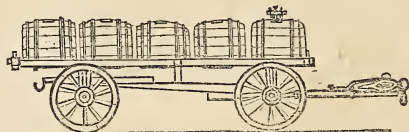


TANK.—FIG. 48.

the urine, or for domestic use. Lastly, let there be a pump fixed in the tank, by which its contents can at any time be transferred to a liquid-manure cart, or discharged on the compost heap, by the use of a hose.

By an arrangement like the foregoing, all the urine from the stables or stalls, and most of the wash from the dung heaps and the yards would be effectually collected, which might either be allowed to ferment spontaneously, the ammonia generated being converted into a sulphate, from time to time, by the addition of sulphuric acid, gypsum, or copperas, (sulphate of iron,) or it may be diluted with water, by which means much of the ammonia would be retained in solution as a carbonate—the former being the most effectual mode of securing the ammonia in the liquid. If nothing is used to fix the ammonia, it would be advisable to have the tank divided in the middle, allowing the urine or drainings to accumulate, diluted with three times its bulk

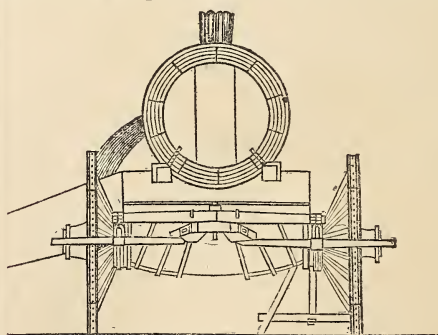
of water, until one division is full; this should be allowed to ferment for six weeks, when it will be fit to apply to the land as a top-dressing; the water used to dilute it retaining in solution most of the ammonia generated by the decomposition of the urea. If this arrangement be



LIQUID-MANURE CART.—FIG. 49.

adopted, it will be necessary that the drains should be made to communicate with either division of the tank, at pleasure; this may be effected by making the main drain divide into two branches near the partition in the tank, with a sluice placed in each branch of the drain leading to the separate divisions, so that the liquid may be discharged into either division; the pump, also, should have a moveable pipe, or should be moveable itself, so that either division of the tank may be pumped out at will.

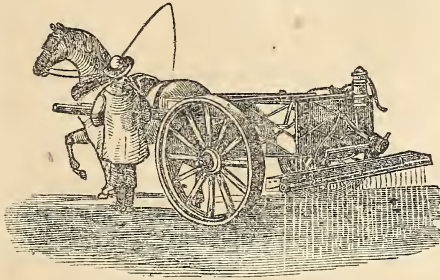
In applying this manure, where the soil is light and not deficient in organic matter, loam, or mould, it would be advisable to administer it in a liquid form; but where the land is stiff and clayey, its application in the form of a compost will be found most serviceable, as it then renders the soil lighter, more porous, and of easy cultivation. To the farmer possessing light soils, liquid manure from the tank, with the ammonia properly converted into a sulphate by the use of gypsum or sulphuric acid, will be found of great value. It may be applied to the land with a liquid-manure cart or a hand tub,



LIQUID-MANURE CART.—FIG. 50.

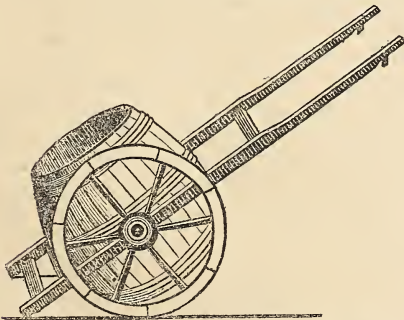
denoted by the accompanying cuts, just before the last plowing for the seed, or as a top-dressing for the young crops; particularly, when they are looking yellow and sickly; but let this important fact in regard to the application of liquid manures, always be borne in mind: *That it is*

a waste to give it to plants before the formation of their secondary leaves, which is true in all cases. If applied at other periods, it will have some effect, but not so much. When applied directly to the plants, it is preferable to use it in showery weather; for let it always be remembered, that, during warm and dry weather, plants ab-



LIQUID-MANURE CART.—FIG. 51.

sorb fluids faster than when it is cool and dull, and that they perspire most in a dry, warm atmosphere. If the supply at the roots, therefore, is not kept up, then they become deteriorated in quality, and the produce is considerably lessened. The practice of pouring manure water immediately around the stem of a plant should be avoided, for two reasons; first, the roots, which absorb most, are in or approaching the centres of the spaces between the drills or rows; therefore, to be benefitted by it, the liquid should be distributed there. Another very important matter, common in vegetable culture, should not be lost sight of; that is, by applying the liquid in a limited circle around the plants, individually, as the roots have less inducement to travel



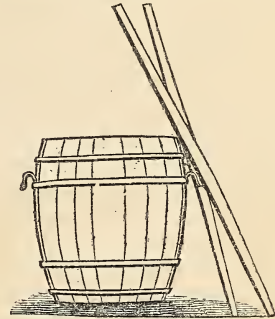
LIQUID-MANURE HAND CART.—FIG. 52.

in search of food; hence, they will be fewer in number. But if their food be placed at a greater, yet a reasonable distance from them, they will seek it out by instinct, as it were, fresh roots will be emitted, and they will have a much larger pasture to feed in.

When the liquid manure is to be used for watering the plants, a portion of it is pumped

out of the tank into casks, fixed on watering carts, denoted by fig. 49 and fig. 50; and then diluted with 5 or 6 times its bulk of water, and allowed to flow gently over the surface of the land between the plants, either by letting it run, when clear, through a tube perforated with holes, or upon a plank, when thick or turbid.

A portable liquid-manure cart has lately been constructed in England, denoted by fig. 51. It is made of iron plates, securely cemented and bolted together, and contains 200 gallons. It is mounted on wheels, four feet, ten inches high, with a new pattern half-round tire, four and a half inches wide. The tank body is fitted with a brass outlet valve, acted upon with an iron-lever rod, with which the driver opens and closes the valve whilst walking by the side of the horse. The pendulum-spreading apparatus, with regulating slide front, is adapted to



LIQUID-MANURE TUB.—FIG. 53.

water uneven land six feet broadcast. A partition, running lengthwise the inside of the tank, prevents the surge and overflow of its contents when upon rough land or bad roads. A simple contrivance, also, consisting of a box trough, and four flexible India-rubber tubes, is made to water four rows or ridges of turnips any required width at a time; two lads, with a handle in each hand, guide the delivering tubes in applying the liquid manure, guano water, dissolved bones, bleacher's ley, soap suds, diluted night soil, &c.

Meadows just mown, or fields sown with grain, may also be thus watered, as the vegetative force, imparted by this liquid manure, although of short duration, may have a great influence; for, once covered with green young plants, the ground is protected from drought; and, moreover, the plants themselves, by this means, rapidly acquire the necessary strength to resist various adverse influences, and to draw from the soil and atmosphere their quota of nourishment.

Another mode of spreading this manure, as has long been practised in Flanders, is, to take

it from the tank without diluting, convey it to the fields in casks, and pour it into a tub, fig. 53, from which it is made to flow over the ground; or it is distributed directly from the tank in a hand cart, denoted by fig. 52.

It is a question which has not been satisfactorily determined, whether means may not yet be devised of *completely, easily, and cheaply* separating the fertilising ingredients of urine and tank stuffs from the water in which they are dissolved. It is well known that alum, green vitriol, (sulphate of iron,) Epsom salts, (sulphate of magnesia,) and the sulphate of zinc, when mixed with fermenting urine or tank stuff, cause a precipitate to fall to the bottom, more or less dense, which will contain the phosphates and a portion of the other saline, and even of the organic constituents of the liquid. This precipitate, therefore, when dried to a powder, may be used as a fertiliser, either by itself, or what is better, in admixture with other fermenting manure; but all these substances leave most of the valuable salts in the water behind them, and, therefore, besides their cost, are open to the objection that they do not perform the purposes for which they have been employed.

The method which would seem to be the most rational, and is generally within the reach of the farmer, without much expense in the outlay, is, to absorb the whole liquid manure by partially-dried peat or swamp or pond muck, and thus add to its bulk, the fertilising matter contained in it. A method which has been extensively adopted both in Ireland and Scotland, is, to use the peat in a half-charred state, instead of using it raw. In localities where peat does not abound, charred saw dust, tan bark, apple pomace, or bagasse may be substituted with equally good effects. The waters of barn yards, common sewers, of gas houses, bone boilers, glue makers, bleacheries, flannel manufactories, &c., &c., may all be applied with the forenamed apparatus, or they may be absorbed by peat, &c., as recommended above.

FATTENING ANIMALS IN CONFINEMENT.

I PERCEIVE by the May number of your paper that you have seen fit to publish an extract from a letter of mine to a venerable friend, in which I mentioned an experiment in feeding oxen confined in the stalls. Although it was not intended for publication, yet, on account of the remarks it elicited upon the subject, I was glad you deigned to notice the communication.

I do not now intend to raise the tomahawk for contest, but with the calumet in hand, to say

that I cannot discover wherein said neighbors were right in any one particular. The cattle did not sicken, but fatten. Whether they would have fattened better in the open air, was not tried, and is not known; and if I "get more weight of fat, flesh, and manure from the food consumed," I attain the object sought.

I am willing to concede that the flesh of the wild animal is healthier and better in all respects, except, perhaps, for making candles, or enlarging the business of the undertaker, than the pampered, artificial brute. But farmers aim at the greatest profits; and when the market will give us as great a price for the lighter and leaner animal, I will supply them equally fed, duly exercised, and stormed upon. Because, deer, elk, partridges, &c., are better, taken in proper season, than domesticated stock, I am not certain as it follows that stall feeding is to be condemned. Whether the former would be relished better by pampering awhile, I am not prepared to say. The wild pigeon is said to improve by confinement and feeding; at all events, I have had them taken wild, when "barring the trimmings," I would as lief dine upon a paper of pins. Wild animals, birds, &c., I believe are taught by nature to seek for the muscle-forming food to give them strength and corporal activity. Mere fat would encumber them. Hence, jockeys match their horses sometimes by fattening the more spirited steed with oily substances, and feeding the slower one with those kinds of provender that form the muscle, and therefore a livelier action.

But if game be better because, it has more muscle and less fat, why would not the ox be better beef if worked while fed? I should probably secure more nearly the quantity of exercise he would take in a state of nature; for an ox would exercise but little in the open field if supplied with drink and food. Of course, the flesh would be less flabby and more solid, if put on while moderately working. Would it not be tougher, too?

I have been taught to believe that the lean of a very fat beeve is more tender, juicy, and better flavored than the lean of an animal poorly or moderately fattened; though the quantity of muscle be the same in each animal; and if the lean only be used as the part to be eaten, and the fat rejected as an article of diet, the whole grease-consuming community, I think, would be as much better as you suppose the wild game of the forest is better than the domesticated stock confined and fattened in the stall.

The graziers of England might, with propriety, be governed by different rules, on account

of climate, and perhaps, prices. I should prefer American authorities on this subject, where feed, breed, and climate are the same. And if experienced gentlemen would write more upon the different modes of fattening all sorts of stock with reference to cost, quality, and profit, it would be very interesting to some of your readers.

W. B. W.

Fishkill, N. Y., May, 1851.

NEW IMPORTATION OF MERINO SHEEP.

I TAKE great pleasure in complying with your request, and will give you a brief account of my late journey to Europe, for the purpose of purchasing Merino sheep, with a view to improve that breed in this country.

It was my original intention upon setting out from this country, to purchase some 300 or 400 pure-blooded Merinos, mostly in Spain; but I was unable to find any in that kingdom that would warrant me any compensation for my time and money. Before proceeding to Spain, I was repeatedly informed that the original Merino breed, (for which Spain was once so celebrated,) was nearly extinct; yet I had a desire to go there and see for myself. Before leaving France, however, I examined and purchased a few of the celebrated French sheep, near Rambouillet. On leaving that country, I directed my course to Madrid, where I was informed that most of the sheep owners lived. Here I spent several days visiting most of the large wool growers, in order to learn as much as possible in regard to the sheep of this country. I became fully satisfied that I should find no good, pure-blooded Merinos in Spain. They all gave nearly the same account of the degenerate condition of the sheep at the present time. They assigned the French invasion as the principal cause, which, with its attending evils, led to this degeneracy from the original stock. At the time of this invasion, nearly all of the best flocks were destroyed, and the remainder were sold for foreign countries, or mixed with other breeds. Still, after meeting with all these discouragements, I was not satisfied until I had seen them with my own eyes. Accordingly, I went about 200 miles further down, making my way through Estramadura, where all of the best sheep are said to be kept during the winter season. Here I examined many of the most noted flocks, and was then forced to believe all that had been told me before, in regard to their degenerate condition. I found them very small in size, thin in wool, and very deficient in oil, not presenting that dark surface which characterises the original

Merino. In many of the flocks, nearly half of them were the regular old-fashioned, black sheep, and I do not recollect seeing a single flock but what contained more or less of the last-mentioned variety.

Not finding anything in Spain to my mind, I concluded to go through Germany, and, if possible, find some of the pure, full-blooded Merinos. Having read the able communications of Charles L. Fleischman, contained in the Patent-Office Report of 1847, I thought it advisable to go directly to Stuttgart, where Mr. F. resides in the capacity of United-States Consul, and consult him in regard to the object of my search. I found Mr. Fleischman a very intelligent and obliging man, willing to assist me in every possible way. I spent one day with him, visiting an agricultural school near Stuttgart, where there was an interesting exhibition of agricultural implements, seeds, stock, &c.; also, collections in natural history. These were all very good except the sheep, which could only be reckoned about second best.

As Mr. Fleischman was formerly master of a large sheep estate, and thoroughly acquainted with nearly all of the best flocks in Germany, I persuaded him to travel with, and assist me in the purchase of some of the best Merinos that could be obtained in that country. With his guidance, I was enabled to see all of the best flocks. The breed is mostly Saxon. The fleeces are exceedingly light and fine, and altogether unfit for the wool-growing interests of the United States.

I did not find but two flocks of pure Spanish sheep in the whole country. One of these was small and had not been very well bred; but the other, I must say, as a whole, was the best lot of sheep I ever examined. Of these, I purchased 28, all that could be had for "love or money." The original stock from which these sprung, was brought from Spain, in 1811, having been selected from the far-famed Infantado Negretti flock, and kept pure and uncontaminated since that time. The flock from which I purchased, is owned in Prussian Silesia, and I am confident that they possess more good qualities than any other that I had the pleasure to meet with. They are much finer than our best Merinos in this country, carrying an even fleece over their whole body, and are woolled down to their very hoofs. In short, I am bold to say, that they are the most perfect sheep I ever saw. They are of a fair size and well shaped, with a dark surface and a clear white oil. There is a beautiful crimp to the wool, and withal, they

are very heavy shearers. These sheep were shipped from Bremen, in the steamer Herman.

Not being able to obtain so many as I wanted in Silesia, I returned again to France, and purchased a few more of the French sheep, making in all, 114 including the Germans. In selecting the French sheep, I did not choose the largest-sized, coarse-woolled ones, but rather those short-legged, thick-set, fine and thick-woolled, with a good deal of crimp, that gives the fleece a beautiful appearance. At shearing time, I intend to weigh the sheep and fleeces both of the French and Germans, in order to obtain the relative value of each breed.

I was very much disappointed in not finding more good sheep in Europe. Nearly all the flocks were inferior to those of this country. I am satisfied that we have, at the present time, more good sheep in the United States, than can be found in the old country, and that, in the course of a few years, we shall far outstrip them, as every one knows that the Americans are bound to go ahead.

GEORGE CAMPBELL.

Westminster West, VI., June, 1851.

PHILOSOPHY OF EATING.

Use but two or three kinds of food besides bread and butter, at a single meal, and never eat anything between meals. You should eat at regular hours, and but three times a-day, with two intervals of not less than five hours each, nor more than six.

Cold water retards digestion, and so does any liquid, if much is taken during or soon after a meal; half a glass at a meal is enough. From an hour and a half after a meal, until within half an hour of the next one, you may drink as much water as you desire; it is best, however, to drink but a swallow or two at a time, with an interval of half a minute or more; otherwise, you may take more than nature requires before you know it, just as in eating fast. If too much fluid is taken during meals, it dilutes the gastric juice, thus weakening its powers of digestion, and retaining the food longer in the stomach than is natural; it also causes an acid stomach, heartburn, fullness, belchings, and bad blood, producing, according to circumstances, a dryness, or rawness, or a sensation in the throat, like indigestion from other causes, whether from quality or quantity of food.

All errors as to diet arise from quantity or quality, and I propose one safe rule to each, applicable to all persons, and under all circumstances.

As to quality, the general rule is to eat that

which you like best, and which you find by close observation and experience is followed by no uncomfortable feeling about the head, hands, feet, nor stomach.

As to quantity, take as much at one meal as will allow you to become decidedly hungry by the next meal; this can only be determined by consecutive observations; but remember, never swallow an atom of food unless you are hungry; never force a particle of food on yourself; the brute creation cannot be induced to eat nor drink, if slightly ill or excited, guided only by their poor blind instincts; and we, who are as much higher than they, by the reason that is within us, ought to feel ashamed to act less wisely; and yet, nine tenths of all our ailments, acute and chronic, enter here; and nine tenths of them all might be cured thus, if taken in reasonable time, and if properly persevered in.

The finer all food is cut with a knife, before put into the mouth, the sooner and easier it is digested, on the same principle that a large piece of ice placed in a vessel set in water will require a longer time to melt, than if it were first divided into many small pieces. The gastric juice dissolves solid food from without inwards; hence food, especially all kinds of meat, should be cut up in pieces, not larger than a pea, before it is placed in the mouth, taking in as many pieces at a time as is convenient. This precaution would not be needed were persons to eat slowly, and masticate their food properly; but our national habits are otherwise, nor is there much hope of a speedy change in this respect.

For an hour after dinner, and half the time for other meals, do not lie down, do not sit to sew, nor maintain any stooping position; do not ride on horseback, nor study, strain, lift, nor perform any labor, bodily nor mental; a leisure stroll in the open air is best; or reading a newspaper; these require no mental effort. While walking, keep your hand behind you, and your chin on or above a horizontal line, and endeavor to feel in a good and cheerful humor with yourself and all the world.—*Dr. Hall.*

AMOUNT OF FOREIGN FLAX CONSUMED IN THE LONDON TRADE.—It is asserted that a sum a little short of £6,000,000 is annually expended in the purchase of foreign flax. The yearly consumption of this material for the London trade is computed at 120,000 tons. If this were grown at home, it would occupy 400,000 statute acres; the value of the crop would be £6,500,000, and that of the seed £1,400,000, making a total of nearly £8,000,000.—*Journal of Agriculture.*

MR. MORRIS' SECOND ANNUAL SALE OF IMPROVED STOCK.

THIS sale took place at Mount Fordham, near New York, agreeably to the advertisement, on Tuesday the 24th of June. We have space only for the particulars of the pure-bred animals.

SHORTHORN COWS AND HEIFERS.

- Lot 1, York, age unknown, owing to circumstances, pedigree could not be given on the day of sale, General Cadwallader, of Philadelphia, \$110
- " 2, Cleopatra, 9 years old, General Cadwallader, of Philadelphia, 85
- " 3, withdrawn from the sale.
- " 4, Coquette, 4 years old, one of the starred animals not recommended, E. H. Smith, of Smithtown, L. I., 50
- " 5, Red Lady, 4 years old, General Cadwallader, of Philadelphia, 175
- " 6, Eleanor, 4 years old, General Cadwallader, of Philadelphia, 135
- " 8, Miss Rolfe, 2 years old, A. Van Ingen, Jr., of New Jersey, 105
- " 9, Fame, 1 year old, General Cadwallader, of Philadelphia, 60
- " 10, Red Rose, 1 year old, one of the starred animals not recommended, G. Hopkins, of L. I., 30
- " 11, Kate, 5 months old, G. G. Hubbard, of Massachusetts, 140
- " 12, Lily, 3½ months old, Joel Terrell, of Oswego, N. Y., 80
- " 13, Beulah, 2¾ months old, General Cadwallader, of Philadelphia, 55
- " 14, Pocahontas, 11 years old, Henry Parsons, of Canada West, 100

SHORTHORN BULLS.

- Lot 1, Logan, 23 months old, Oliver Slate, Jr., of Throg's Neck, N. Y., 175
- " 4, Mark Anthony, 4 months old, Mr. Wilson, of Wisconsin, 135
- " 5, Passaic, 2 months old, Joel Terrell, of Oswego, N. Y., 50

DEVON BULL.

- Lot 10, Boston, 17 months old, General Cadwallader, of Philadelphia, 145

The shorthorn cross with the Dutch cows, called the "Improved Dairy Stock," sold from \$30 to \$120 each, according to age and quality.

The shorthorn and Ayrshire cross, sold from \$60 to \$90.

Southdown lambs 2½ to 3½ months old, sold from \$25 to \$30.

Suffolk pigs, in pairs, from \$20 to \$37.50.

The weather was highly favorable, and between 300 and 400 persons were present. Col-

onel James M. Miller conducted the sale with his usual ability and dispatch. The bidding was spirited, and the prices, upon the whole, an improvement on the first sale of Mr. Morris, in October, 1849. We noticed several of our most respectable citizens and country gentlemen present, and right glad were we to observe an increased taste on their part, for improved animals. The time will come when a country gentleman will feel as much ashamed to have an indifferent cow, sheep, or pig on his farm or about his house, as he now would to drive a mean horse or shabby carriage, or furnish his house with cast-away furniture. Among the foreigners present was General Paez, the distinguished patriot, and late President of Venezuela. We found him a good judge of stock, and he handled some of the finest present with evident satisfaction. The Devons were the most attractive to his eye, he highly appreciating their clean limbs and bloodlike form. They reminded him, he said, of a fine Andalusian horse. He informed us that he had several thousand head of Spanish cattle on his extensive *haciendas* in Venezuela.

Mr. Morris has a really beautiful place at Mount Fordham. The house is of stone, capacious, and of very handsome architecture, in the Italian style. The grounds around are ample, and on the large lawn in front of the house the cattle were paraded for inspection. Quite a number of elegant ladies were present, and seemed to take great interest in the stock. We have no doubt that they will exert their good influence hereafter with their husbands and relatives, to procure them a few fine animals to grace their lawns, as well as fine trees, shrubbery and flowers.

The collation was bountiful, and all seemed to partake of it with no little gusto.

Mr. Morris has now sold off all his grade animals, and will hereafter devote his attention to the breeding of none but pure stock.

GRASSHOPPERS UNFIT FOOD FOR LAYING HENS.—

It is an old notion confirmed by modern experience, that laying hens should not be allowed to eat unsavory nor strong-scented substances, as grasshoppers, lest their eggs should be tainted with their flavor

PLOWING.—Never plow wet land in wet weather, much less harrow such, nor when it is wet in itself. Plow deep by degrees, and manure as you deepen. And, instead of the expensive horse, employ the profitable ox.

SALT, URINE, AND LIME.

JOHN RUDOLPH GLAUBER, whose name deserves to be written in letters of gold, among many other useful experiments on various kinds of salts, relative to their fertilising properties, found, that no manure of the kind had such power in tillage, as sea salt calcined in a lime mixture. His prescription is as follows:—

To every 400 pounds of air-slacked lime, add 100 pounds of common salt; temper these together with urine, to a stiff mortar, which, make into small oblong rolls; when sufficiently dried, make a layer of wood, (or coal,) then a layer of these rolls, and so on till the quantity is used up; which set fire to, and let the whole burn out, taking care that no rain nor wet get to these rolls before burning, nor to the lime after burned. After calcination, reduce these rolls to a fine powder, and let it lie half a year, in a dry place, often turning the heap in order to expose it to the air.

Applied to a soil of medium quality, at the rate of 500 or 600 pounds to an acre, this mixture is stated to form a most powerful manure for wheat, which may be sown with the seed. Besides, it will destroy every insect and worm, and neutralise the poisonous acids in the soil.

REMARKS ON THE PEDIGREE OF THE ARABIAN HORSE.

THE Darley Arabian was brought over by a brother of Mr. Darley, of Yorkshire, who, being an agent in merchandize abroad, became a member of a hunting club, by which means he acquired an interest to procure this horse. He was sire of Childers, and also got Almanzor, a very good horse; likewise, a white-legged horse of the Duke of Somerset's, full brother to Almanzor, and thought to be as good; though, from meeting with an accident, he never ran in public. Add Cupid and Brisk, both good horses; Dædalus, a very fleet horse; Dart, Skip Jack, Maurice, and Calypso, good plate horses, though out of bad mares. He covered very few mares, except Mr. Darley's, who had but few well bred besides Almanzor's dam.

The second source from which has sprung a very numerous class of our best horses, may be said to be the Byerly Turk. He was Captain Byerly's charger in Ireland, in King William's wars (1689). He did not cover many thoroughbred mares, but was the sire of the Duke of Kingston's Sprite, the Duke of Rutland's Blackheart and Archer, the Duke of Devonshire's Basto, Lord Bristol's Grasshopper, &c.

And the third and favorite origin of many, but whose progeny are certainly not so numer-

ous as the other two in the production of racers, is the Godolphin Arabian. He was a brown bay, about 15 hands, with some white on the off heel behind. There is a picture of him and his favorite cat in the library at Gog Magog, Cambridgeshire, where he died, in the possession of Lord Godolphin, in 1753, then supposed to be in his 29th year.

That he was a genuine Arabian, his excellence as a stallion is deemed sufficient proof. In 1781, then the property of Mr. Coke, he was teaser to Hobgoblin, who, refusing to cover Roxana, caused her to be put to the Arabian, and from that leap was produced Lath, the first of his get.

Many years ago, I was struck with the originality of some genealogical tables that were designed by a Mr. Lounin, a Russian, which have since been published in the Russian Stud Book. Mr. Lounin, who is since dead, was not far wrong in taking the above horses as the three sources from which all our best animals have sprung. The plan adopted, was, to trace the paternal side, and enumerate only such horses as were grandsires of winners; by which means, we have a collection from which, you will perceive, it is easy to derive the pedigrees of all our horses of the present day.

1689 Byerley Turk Jig	1724 Godolphin Arabian	About 1700 Darley's Arabian
1713 Partner	1734 Cade	1716 Bartlett's Childers
1749 Tarter	1748 Matchem	1732 Squirt
1758 Herod	1767 Conductor	1750 Marok
1774 Highflyer	1782 Trumpeter	1764 Eclipse
1784 Sir Peter	1796 Sorcerer	1773 Pot-8-o's
1799 Walton	1808 Soothsayer	1790 Waxy
1811 Partisan	1815 Welbeck	1807 Whalebone
	1823 Bedlamite	1722 Camel

Now, by only inserting such horses as were sires of stallions that got winners, we have the entire paternal line of every horse in the kingdom.

Take, for instance, Touchstone, the property of the Marquis of Westminster, and he would come into the above list, being the sire of Coth-erstone, who is sire of Glauca, and of many other winners. Touchstone was got by Camel. A fashionable stallion is Melbourne; he was got by Humphrey Clinker; Humphrey Clinker was got by Comus, and Comus, by Sorcerer. Melbourne, a good horse, is the sire of Canegore, the best mare of her day; he is also sire of Prime Minister, second favorite for the ensuing Derby.

So is the stallion Epirus; he was got by Langer; Langer, by Selem; and Selem, by Buzzard—Woodpecker—Herod. Epirus is the sire of Pyrrhus the First, winner of the Derby he is

also sire of the first favorite for the Derby this year.

Bay Middleton, the property of Lord Clifden, (sire of the Flying Dutchman,) was a good horse; he won the Derby, and was never beaten; he was got by Sultan, and comes from the same paternal blood as Epirus.

And thus you will perceive that an easy reference is obtained to the blood of any horse of the present day, at least on the paternal side.—*Veterinarian.*

SALE OF MR. VAIL'S STOCK.

This took place at Mr. Vail's farm, in Troy, on the 26th of June, as advertised. Col. James M. Miller was the auctioneer. The prices are higher than any obtained at a public sale of shorthorns within the last nine years. This is an evidence that improved animals are becoming more and more appreciated, and that these sales, so long as thus honorably conducted, are the best means of disposing of a large stock. They also have the advantage of bringing a large number of breeders together, for mutual improvement and advantage.

COWS AND HEIFERS.

Lot 1, Lily 2nd, 6 years old, General Cadwallader, of Philadelphia,	\$170
" 2, Lily 3d, 3 years old, Henry Wells, Cayuga county, N. Y.,	135
" 3, Lily 4th, about 18 months old, General Cadwallader, of Philadelphia,	90
" 4, Lily 5th, calved March 19th, 1851, General Cadwallader, of Philadelphia,	165
" 5, Fun, 7 years old, Henry Wells, of Cayuga county, N. Y.,	235
" 6, Dahlia 5th, 2 years old, General Cadwallader, of Philadelphia,	75
" 7, Eunice 2nd, 10 years old, General Cadwallader, of Philadelphia,	160
" 8, Eunice 3d, 8 years old, John Osborne, of Oneida county, N. Y.,	125
" 9, Wilddame 4th, 3 years old, General Cadwallader, of Philadelphia,	225
" 10, Wilddame 5th, calved Feb. 20th, 1851, (sick,) General Cadwallader, of Philadelphia,	55
" 11, Daisy 3d, 7 years old, S. P. Chapman, Clockville, Madison co., N. Y.,	230
" 12, Daisy 5th, about 20 months old, General Cadwallader, of Philadelphia,	150
" 13, Fillpail 5th, about 20 months old, General Cadwallader, of Philadelphia,	95

Lot 14, Victoria 4th, 4 years old, Henry Wells, of Cayuga county, N. Y.,	90
" 15, Rosette 2nd, 4 years old, General Cadwallader, of Philadelphia,	175
" 16, Rosette 3d, about 20 months old, William Osborne, of Oneida county, N. Y.,	80
" 17, Rosette 4th, about 10 months old, General Cadwallader, of Philadelphia,	105
" 18, Yellowskin, 2 years old, General Cadwallader, of Philadelphia,	110
" 19, Willy, 14 years old, General Cadwallader, of Philadelphia,	90
" 20, Profitable 2nd, about 10 months old, Henry Wells, of Cayuga county, N. Y.,	125
" 21, Victoria 5th, about 2 months old, General Cadwallader of Philadelphia,	75

BULLS.

Lot 24, Beppo 3d, calved Sept. 2d, 1848, Thomas Richmond, of Ganauque, Canada West,	150
" 25, Leopold, calved Oct. 6th, 1849, Cameron, near Kingston, Canada West,	50
" 26, Grand Duke, calved Feb. 24th, 1850, John Osborne, of Oneida county, N. Y.,	95
" 27, Falcon, calved Sept. 23d, 1850, Thomas Richmond, of Ganauque, Canada West,	90
" 28, Marquis, calved Aug., 1849, Thomas Richmond, of Ganauque, Canada West,	60
" 29, White Prince, calved Apr. 12th, 1851, F. Yates,	55

HEIFER CALVES.

Lot 30, Beauty, about 2 months old, Wm. Osborne, of Oneida county, N. Y.,	90
" 31, Red Lady, about 2 months old, General Cadwallader, of Philadelphia,	60
" 32, Fashion, about 6 weeks old, (not on catalogue,) General Cadwallader, of Philadelphia,	30
" 33, Fillpail 6th, a yearling heifer, (not on catalogue,) Wilson, of N. Y.,	90
	\$3,520

At private sale and not on catalogue, Lady Barrington 5th, 2 years and 10 months old, got by premium bull Meteor, out of Imported Lady Barrington 3d, Aaron Clement, for T. P. Remington, of Philadelphia, 350.

Hilpa 4th, roan heifer calf, dropped April 9th, 1851, being 2 months and 17 days old, got by Duke of Wellington, out of imported Hilpa, S. P. Chapman, Clockville, Madison county, N. Y.,

300

\$4,170

It will be seen by reference to the above statement, that there were 19 cows and heifers sold, which brought \$3,010, averaging about \$160 each.

Seven heifer calves brought 640
averaging \$91

Seven bulls and bull calves, 520
averaging \$74 each.

In all, 33 animals including two heifers at private sale, brought 4,170

The whole lot, old and young, averaging \$126.

WOOL GROWING IN VIRGINIA—A REMEDY
AGAINST DOGS.

At the present time, when the attention of the people of our northern states is turned to Virginia, as offering a fine field for investment in her lands for agricultural, mining and manufacturing purposes, it may not be amiss to point out the many advantages possessed by a very large portion of the state for the wool-growing business. This subject has been brought to my mind by seeing the fact stated, in many newspapers, that, out of 100 parcels of wool collected by an extensive wool dealer at the north, from various parts of the United States, for exhibition at the World's Fair, the palm was awarded to a parcel grown by the Messrs. Patterson, on their sheep grounds, in Bedford county, Virginia.

The whole tier of Piedmont counties, immediately under the Blue Ridge, from the Potomac River to the North-Carolina line, namely, Fauquier, Orange, Albemarle, Bedford, Patrick and all intermediate counties, have been fully proved by a few northern wool growers settled in them, to be most admirably adapted to this business—the most suitable grasses for sheep grow finely. Diseases incident to this animal are of seldom occurrence, and the wolf, that deadly foe to sheep, is rarely ever seen. Franklin, Henry, and Patrick, the least opened of this range of counties, contain very few, if any wolves. These three counties offer, on account of the low price of land and the absence of all ravenous wild animals, a great opening for sheep grazing. Large tracts of uncleared land are to be had there on

mountains and hill sides, for perhaps, less than 50 cents per acre, which, if partially cleared of its undergrowth, (that the rays of the sun might strike the earth,) would put forth grass spontaneously, and make excellent ranges for sheep.

The general evil of dogs, which I see is claiming at present the most stringent legislation in our northern states to protect the sheep, likewise exists with us. Our own legislature has done much, and will, no doubt, do more, at the proper time, to eradicate this evil. In the meantime, let me publish to the sheep-raising world, a remedy against the destruction of sheep by dogs, which was given me a short time since, by a highly respectable and valued friend, himself an extensive wool grower. It consists simply in placing on one sheep in every ten of the flock, a bell of the usual size for sheep. The reasoning of my friend is this: The instinct of the dog prompts him to do all his acts in a sly, stealthy manner—his attacks upon sheep are most frequently made at night while they are at rest, and the sudden and simultaneous jingling of all the bells, strikes terror to the dogs; they turn tails and leave the sheep, fearing the noise of the bells will lead to their exposure. The ratio of bells might be made to vary according to the size of the flock.

The importance of sheep preservation from dogs, the writer hopes, will claim for this communication an insertion in most of the papers of the Union, that a remedy so cheap and simple may be fully tested.—*Richmond Whig*.

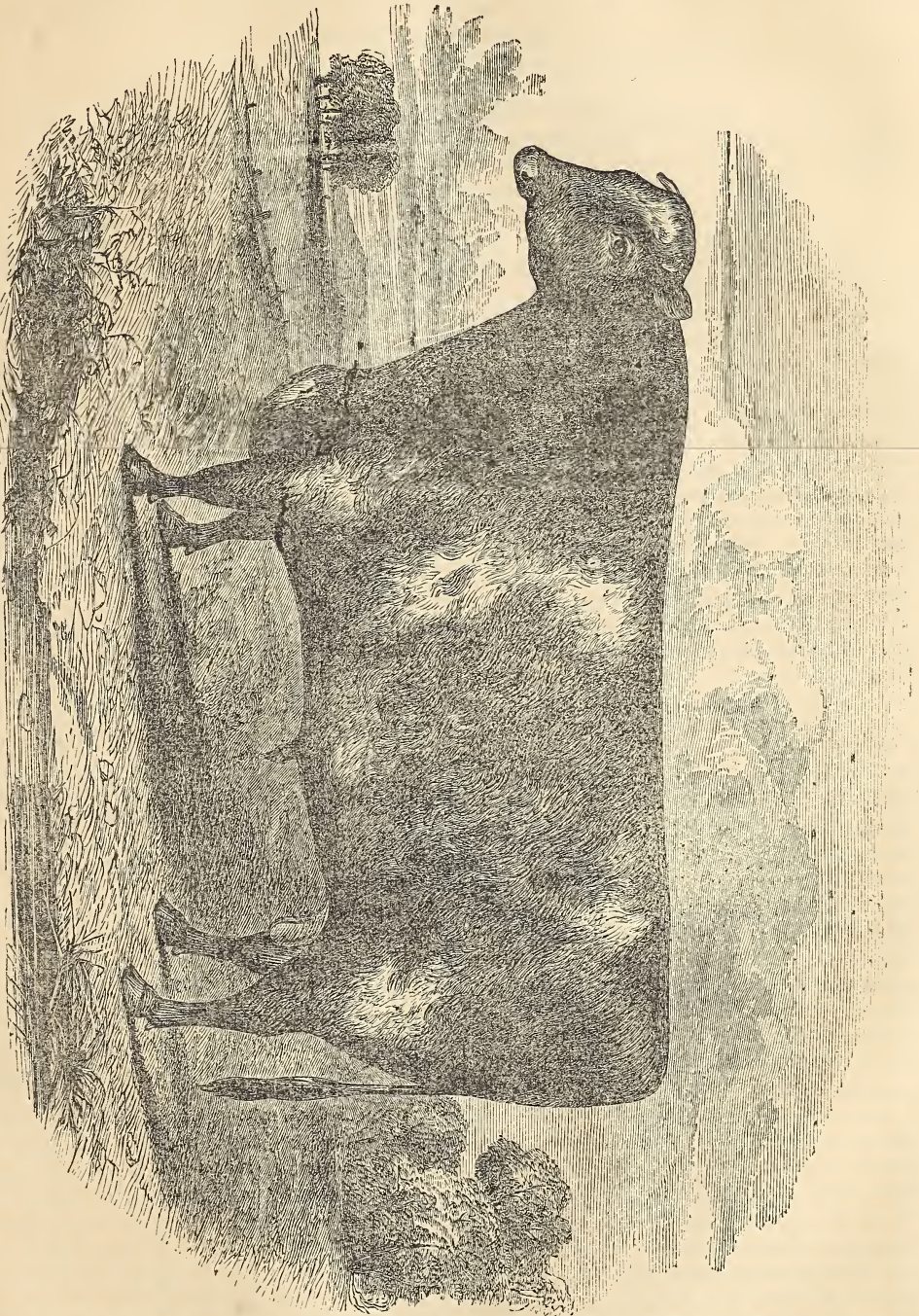
SHORTHORN BULL EARL OF SEAHAM.

This month we give a portrait of the distinguished bull, Earl of Seaham (10,181). He was bred by John Stephenson, Esq., of Wolveston, county of Durham, England, and was calved April 21st, 1848, now three years old. He was selected by Mr. Stevens, and was imported by him and Colonel Sherwood. He was shipped from Liverpool in June, and arrived in New York in August. In one month after his arrival, and before he had recovered from the effects of his voyage, he was exhibited at the Show of the New-York State Agricultural Society, at Albany, in September, 1850, and won the first prize as the best two-year-old shorthorn bull shown. In October, he was exhibited at the cattle show of the American Institute of the City of New York, and won the first prize as the best shorthorn bull, in the aged class of shorthorns, or bulls two years old and upwards.

Earl of Seaham is of the famous *Princess* tribe of shorthorns, that is so eminent for style,

quality, and milking capacity. Colonel Sherwood's Red Rose, now four years old, whose made 49 pounds of butter. Another cow of this tribe, Princess I, now four years old, sister

EARL OF SEAHAM.—FIG. 54.—THE PROPERTY OF AMPROSE STEVENS AND J. M. SHERWOOD.



dam is a sister to the dam of Seham, is an extraordinary milker, and from her milk, in 25 days, ending on the 6th of June, 1851, there were to the dam of Earl of Seham for two months before being put to grass, this season, on hay and turnips, gave daily, from 20 to 25 quarts of

rich milk, and only three or four days during these sixty, gave less than 23 quarts a-day, and for more than thirty days of the sixty reached 25 quarts. She doubtless would have made as much butter as Red Rose, had the experiment been tried.

It will be seen by an advertisement in our columns, that Colonel Sherwood offers this fine bull for sale; a better one can be bought in no country, and his equal, certainly not in this.

ECONOMICAL MANURE SHEDS.

H. M. BAKER, a Virginia farmer, thus describes the manner of protecting his manure from washing rains, and the exhausting power of the sun:—

“Set a row of forked posts through the cattle yard, 10 feet high to sustain a range pole. Nine feet distant, set another row, eight feet high; and nine feet further, another row six feet high; put range poles upon these and cover the whole with old rails or poles, and brush, and upon these, put straw, cornstalks, or sedge, to form a roof, which will shed off most of the water and all the sun. Brace the corners well to prevent accidents from high winds, and heap up all your manure, commencing at one end, so as to allow cattle to occupy the other portion, and you will gain twice the cost of the shed every year.”

A SHEEP SHEARING FESTIVAL.

MR. A. L. BINGHAM, of Cornwall, Vermont, as well as his brother, Mr. Merrill Bingham, keeps large flocks of the French and other Merino sheep. The last of May is the time of their sheep shearing; and in order to make it more social and agreeable, and show the country what their flocks would produce, they invited their friends and neighbors to be present on the occasion. Mr. E. D. Barber, of Middlebury, gives the following report of the clipping of the French Merinos from the importation of Mr. Taintor. The fleeces were in the dirt. How much clean, well-washed wool they would have produced, we are unable to say:—

“Mr. A. L. Bingham’s flock of French Merino sheep consists of 93 breeding ewes, 23 yearling bucks, and 105 ewes and buck lambs; being from two to five months old, and weighing from 75 to 140 pounds, according to their age. A three-year-old buck, recently imported, weighed 339 pounds, and sheared, with only ten months’ growth of wool, 31½ pounds. A two-year-old buck, not shorn, weighed 217½ pounds. For this last-mentioned buck, Mr. Bingham has been offered \$1,000 by different men. The following

is a statement of the weight of the sheep and of their fleeces, as sheared the 20th of May:—

Live weight.		Weight of fleece.	
Ewe No.	Weight.	Weight.	Weight.
7,	122 lbs.	19 lbs.	2 oz.
40,	157	17	0
11,	149	18	6
112,	118	17	12
31,	169	14	14
110,	128	22	6
139,	92	19	12
85,	123	18	12

Making the average weight of the sheep, 132½ pounds, and the average weight of the fleeces, about 18 pounds, 7 ounces. On the 21st of May, he sheared six more sheep, the weights of whose fleeces were as follows:—

No. 201,	17 lbs.	No. 200,	16½ lbs.	No. 38,	18½ lbs.
90,	16½	85,	14½	250,	16½
201,	17½	117,	15½	230,	15
31,	15½	39,	21½	110,	20
71,	18	31,	18½	7,	19
71,	16½	39,	17		

Making the average weight of the fleeces about 17 pounds, 4 ounces.

Mr. Merrill Bingham’s flock produced the following shearing:—

No. 111,	17 lbs.	0 oz.
5,	13	5
6,	12	6
59,	12	14

Making the average weight about 13 pounds, 14 ounces.

On the next day, he sheared five breeding ewes, the weights of whose fleeces were as follows:—

No. 81,	19 lbs.	2 oz.
67,	16	12
55,	15	8
54,	16	2
201,	15	14

The average being about 16 pounds, 10 ounces. At the same time, he sheared eight half-blood ewes, one year old, being a cross of the French with the Spanish Merinos, with the following result:—

No. 1,	8 lbs.	14 oz.
2,	8	12
2,	8	4
4,	7	6
5,	8	0
6,	7	8
7,	9	6
8,	7	3

The average being about eight pounds, two ounces. Mr. M. Bingham imported, in March last, 13 French Merino bucks. He has sold

seven of them and received prices for them varying from \$200 to \$300. One of them he has been offered \$400 for and refused the offer. Although I did not see the whole of these sheep sheared, and the fleeces weighed, I have the above facts on authority upon which I place implicit reliance. I certainly would not give them to the public in this shape unless I had the fullest confidence of their truth. For a part of them I can vouch from my own personal observation. Can these sheep be beaten in the United States? I believe not, though I do not profess to be "booked up" so perfectly as some others in these matters. At all events, if they can be beaten, this statement may serve to call forth the proof."

Nothing gives us more pleasure than to see a growing disposition among our farmers to get up similar festivals of one kind and another among themselves. By seeing what each other are doing, they enlarge their minds, promote agricultural improvements much more rapidly among themselves than can be done under the isolated, and we add, somewhat niggardly and selfish spirit that has been too long prevailing in our country. English farmers have ever been noted for these kinds of festivals, and this is one reason why they are so enlightened and prosperous men. They not only have their sheep shearings, but sheep shows and sales; they also have festivals for examining each other's grain, grass, and vegetable crops, and various other things.

After the shearing was over, all present sat down to a capital dinner, where most of the delicacies and substantial of the season were served up evidently to the gratification of the company. Our only wish is, that we could have been present to enjoy the festival.

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 REVIEW OF THE JUNE NUMBER OF THE
 AGRICULTURIST.

Virtues of Milk.—Here is a short article reiterating the old saw—"milk is a most perfect diet—nothing like it;" because chemical science finds the necessary constituents of human food in its composition. And yet, notwithstanding the truth of science, the truth of experience proves it is not healthy in a country affected with bilious diseases; in many places, it is absolutely poisonous, producing disease and death. The writer says it is necessary it should be pure, or it will prove a curse rather than a blessing. Very sound doctrine, that; and equally sound to say one half at least consumed by the human family is impure, and consequently, unfit for human food. I am aware of the unpop-

ularity of refusing to allow milk all the virtues claimed for it; but, nevertheless, I believe it occasions more sickness than any other single article of food.

A Jaunt in Ohio, No. 3.—This article is not so interesting as the previous ones. The writer, whoever he is, is most evidently not in love with Ohio farming. The description of Colonel James' "grand prairie farm," which "Visitor" rode half a dozen miles to see, is entirely lost sight of in his poetical picture of an Ohio prairie under an October sun. After gazing himself full of it, (I hope he afterwards found room for that "substantial lunch,") he rides away and leaves us to imagine all sorts of things we please, about this grand prairie farm.

Brown Corn.—The writer thinks it desirable for every farmer to raise a small quantity of this corn for early feeding. This may be desirable at Poughkeepsie, but not much further south. All corn from as far north as where this variety came from becomes quite worthless when planted in the Carolinas.

Value of Sewerage Water.—This is the very point I have always contended for, that we are sending ships to Peru to bring the very article which we daily waste in such immense quantities, not only in all the cities, but upon almost every farm of the country. How many farmers save the vast amount of fertilising matter formed from human food? How many save bones, blood, hair, horns, hoofs, and other offal of butchered animals for manure? Who ever thinks of manuring a hill of potatoes with an old pair of boots, or an old coat or hat? What a laugh my neighbors had at the old Captain and his book notions, when I planted a wheelbarrow load of brick bats and old mortar under each of my young fruit trees. "That's queer manure," said they. Yes, it was queer to them, but it made the trees grow; and so would a thousand wasted substances double our farm products, if saved and applied, not forgetting the sewer water from every farm kitchen, which should be conveyed in pipes to a tank filled with loam and all sorts of scraps and garbage generally wasted.

German Agriculture and German Economy.—It is idle to expect either to be practised here while land is so cheap, so abundant, so fertile, that the owners have no inducement to economise to the extent which necessity compels them to in the "Faderland." But the time is coming.

The Purik Sheep.—Why cannot these domestic animals be substituted in place of dogs? If people must have pets let us encourage them to

keep such as are good for something. Dogs, in general, are worse than worthless. Let our agricultural societies look to the matter. If they can furnish a substitute for the poor man's dog, they will do more good than they ever have done before.

Bathing.—This little paragraph ought to be printed in large letters and hung up in every sleeping room in America. Read it again, this hot weather. It is cooling.

Worthless Furniture.—I grant a lazy woman is so, but not the most so. Words to express the superlative degree of greater worthlessness of her lazy, drunken husband, have not yet been invented.

Pork—Bacon—Ham, No. 3.—The value of this number is not equal to the preceding ones. The directions about butchering and cutting up are entirely too English for our use. What would some of those professional butchers think of one man cutting seven hogs a minute, as has frequently been done at Cincinnati? The recommendation to cool it 24 hours before salting, is not adapted to the latitude where cotton grows. If suffered to remain that long, saltpetre would not save it.

Kentucky Cattle Shows.—A Virginian entering Kentucky through the Cumberland Gap is surprised to find a portion of that state as uninviting as some of the poor land of his own. My dear sir, every state has its poor corners as well as rich centers, like Kentucky. Florida has her Everglades; Georgia, her poor, sandy pine plains; South Carolina, her poor ridges of drift sand; North Carolina, her ditto, as well as vast swamps; Tennessee, her mountainous districts, valued at one cent an acre; Missouri has miles of mountains worth nothing except for lead and iron; Illinois, rich as is her soil, is uninhabitable over vast tracts of prairie, void of timber, and so on of all the rest. In some things one is superior to the other—in other things, the reverse. Let us be content.

But is it any wonder agricultural societies flourish in Fayette and Bourbon? It is not the rich soil. It is not because you found such a fine-looking set of intelligent men. But it is for the reason that always has and always will make every cause flourish. Female influence is the true secret of success; and the failure of every agricultural society ever organised, can be traced to the foolishness of man in undervaluing and neglecting to provide in time for the security of the main brace of every ship afloat. Man is the slave of woman, (Mary is looking over my shoulder and says, "Oh! father"—but I

repeat it,) and can never prosper in an attempt to abolish her power. If, then, agricultural societies wish to succeed, let them look to the highest of all human authority—the great governing power—female influence.

A Chapter on Fowls.—I had long since determined, as had many other of your readers, never to look at another of these eternal cacklings of a brood of old superannuated Biddies, concerning this fowl humbug; but inadvertently got into this chapter and went through it, laughing heartily all the time, at the way this heavy-fisted defender of common sense knocks down the Shanghaes, Burampooters, *id genus omne*, of all the big rooster family. But Mr. A. is entirely mistaken in the character of the American people, if he supposes for a moment he can stop the current of folly in which they are floating through all the phases and fogs of the hen fever, by any amount of argument or ridicule. He might as well attempt to stop the ever onward current that passes his own door. Let both run—both will find a Niagara fall at last, and *great the fall will be.*

Fowl Breeding is another article upon this subject, already rung upon so many changes, your readers would gladly give it one more wring, such as fowls often get about thanksgiving time.

The Ladies' Department.—Where is it? Blotted out entirely. Well, man is the most obstinate animal that ever existed, undoubtedly—that one which grunts, fights, and squeals, and goes ahead backwards, not excepted. I reviewed you for trespassing upon the rights of the ladies; instead of amending, you get up your bristles, and upset the whole page into pie, I suppose, and not one single sentence, either in that department or any other, is to be found in this June number, intended to attract the eye, or win the female heart. Now, as you have had the gratification of your obstinacy, and shown us you *can* do just what you have a mind to, with your own paper, take an old man's advice who has had some experience, and in future show yourself a little more amiable towards your fair readers. If you wish your paper to go abroad doing good in the world, you must cater for those who are its rulers. The influence of one woman to extend its circulation, is worth ten men. Can you expect that influence when you do not publish one single line exclusively for their use? [Please Sir, Master Captain, we had to leave out the Ladies' Department to accommodate nobody but yourself.—Ems.]

STRAWBERRIES—THE SECRET OF GROWING THIS FRUIT SIX MONTHS CONTINUOUSLY.

THIS secret has been discovered and practised by Charles F. Peabody, of Columbus, Georgia, one of the editors of the "Soil of the South," for several years, not as a theory or mere experiment, nor accidental production, but as a science—a study of time, successfully carried out for profit; for he sends his market wagon into the city loaded with this rich luxury from March till September; and last year, his vines continued to ripen fruit until Christmas.

What is the secret? our fair readers exclaim. What new variety? No other than Hovey's seedling, impregnated by early scarlet, and *never manured*, but kept continually moist by artificial watering; for which purpose, he uses a garden engine.

For four years, Mr. P. cultivated the same variety in rich garden mould, manuring liberally every year, and at any time during summer could have mowed a heavy swath of green luxuriant vines, which would have made very good hay, but that was not what he wished to grow. Failing to get fruit by garden culture, he commenced the experiment which for six years has proved so eminently successful. He cleared off a strip of low land along a little rivulet, the soil of which is coarse sand and loose gravel, intermixed with clay slightly, and of course covered with forest mould, digging out the roots of a thick growth of bushes sufficiently prepared the land. The vines were then set in rows, six of Hovey and one of scarlet, and the surface has never been disturbed since by spade or hoe, except so far as going over the ground once or twice a-year to cut out here and there a decaying vine or bunch of grass or weeds—few of which, however, in consequence of using no manure, ever make their appearance; neither do the plants run to vines, spreading all over the surface every year as they did in the garden. The whole strength seems to be exerted for the production of large rich berries to such a degree that the ground is *red with fruit, not green with leaves*; and this not upon a little plat, but over a field of five acres.

And does he never manure them? is undoubtedly asked by every tyro in the business of growing strawberry *vines*. Mr. Peabody grows roots, stems, and fruit. I repeat, he never manures, never digs the ground nor turns under the old roots to give place to new ones. In autumn, he gives a light dressing of the surface soil of the forest, and covers the ground with leaves; these remain until decayed, and serve to keep

the berries clean during the long bearing season. This, and the watering every hot day when it does not rain, is the great secret of growing strawberries, not only six months, but last year he actually had them upon his table every month but two—January and February. Of course, at the north, the bearing season could not be of equal duration, but it may be greatly extended by the same course of cultivation.

SOLON.

HEMP COTTON.

MR. GEORGE C. DAVIS has exhibited in Louisville, Kentucky, a specimen of hemp prepared in such a manner that it resembles flax cotton, and seems equally well adapted for the manufacture of textile fabrics with that new article. The process of Mr. Davis is much more simple, quicker done, and less expensive than M. Clausen's, and he thinks the cost of preparation will not exceed half a cent a pound, which will enable hemp growers to compete with cotton, and manufacturers to choose between cotton, flax, or hemp, at about the same prices. Perhaps the same process applied to the cotton stalks may produce similar results, as well as several other fibrous plants, hitherto considered worthless.

We believe the discovery of a new method of preparing fibrous plants for the manufacturer is destined to work a revolution in trade at no distant day.

NAMES OF PLANTS.—The importance of having all plants, including fruit trees, properly named, even in small gardens, cannot be too clearly pointed out. A plant may have beautiful foliage and flowers, but without a name, it yields comparatively little interest. Every plant has a history of its own, and the first step towards obtaining a knowledge of that history is its name; the next, its native country. A garden of plants without names is like a library of books without their exterior superscriptions.

SENSE OF HEARING IN THE HORSE.—The hearing of the horse is remarkably acute. A thousand vibrations of the air, too slight to make any impression on the human ear are readily perceived by him. It is well known to every hunting man, that the cry of hounds will be recognised by the horse, and his ears will be erect, and that he will be all spirit and impatience, a considerable time before the rider is conscious of the least noise.—*The Horse and his Rider.*

Horticultural Department.

BY L. F. ALLEN.

MULCHING.

WE have talked somewhat of mulching, and particularly as applied to newly-planted trees and shrubs. The philosophy we consider to be this: Recently-removed, and newly-transplanted roots are tender, and particularly sensitive to harsh treatment. They may be compared somewhat to amputated or wounded limbs of the animal body, which require more attentive treatment and increased care beyond the healthy and perfect limbs maintaining their natural growth and condition. Torn rudely from their natural bed, and lacerated in removal as they usually are, and transplanted into a different soil from which they previously occupied, a thorough revolution is made in their habits. Increased care is therefore required in their cultivation until they have become habituated to their new condition. They require an equable degree of temperature and moisture. Mulching screens them from the violent excesses of a fervid sun; it preserves an equable moisture; it retains the gases and salts of the ground, otherwise escaping from the powerful action of the sun on the roots, thus soothing and knitting them into new life in their struggles for existence and growth. The every-day examples of the more rapid growth of young trees under the shade of a fence or stone wall is a practical demonstration of this, and the superior fertility of soil under such fence or wall in which the various elements of fertility within it are preserved by their shade, over what are to be found in those parts of the field exposed to the scorching rays of the sun; and the washing from the heavy rains, are additional proofs of the benefits to be derived from mulching, which is in fact, the same principle differently applied. The air can equally as well penetrate through and beneath the mulch as through the soil; and as a matter of economy, mulching has an absolute advantage over ordinary cultivation in keeping down weeds and all noxious growths. Added to this, our own experience of the effect in giving increased growth and health to mulched trees and shrubs, over those not so treated, give this practice, in our judgment, a greater value than any mode of procedure, with newly-planted roots, whatever; and even in old plantations, where increased stimulus is necessary, nothing which we have ever tried has been so potent in its improving effects. We recommend it without stint or measure, to all who are engaged in

either fruit or ornamental tree or shrub plantations.

Of one thing, in all mulching practice, do not fail. If your grounds are ever infested by mice, the mulching must be removed as early as September, by which time the usual season's growth of new wood will have been made. If it is left later in the season, it will serve as a harbor for vermin, and they will inevitably destroy the bark of the stem, and consequently the tree or shrub itself. Let the mulch be spread one, two or four feet from the stem, as the size of the tree may warrant, and all the better, if it reach out as far as the roots may spread into the surrounding soil.

ORCHARD CATERPILLARS.

NOTHING so defaces an orchard, as the caterpillar, and certainly nothing of the insect kind can be more destructive, if permitted to prey upon it. The sooner they are destroyed after making their appearance, the better. The remedy is simple and expeditious.

Take a stick of the necessary length to reach their nest from the ground; drive two shingle nails crosswise through the small end within an inch of the point. Early in the morning, or in a rainy or lowery day, when the worms are all snug in the nest, take up your line of march among the trees. Be provided with a little spatula, or paddle, made of a shingle or a mason's trowel, if you have one. Poke the stick, nail end up, into the nest, wind it round carefully two or three times, and the nest and caterpillars with it will all be entangled in the nails. Draw it down to you. With the point of your paddle, or trowel, disengage the nest, and then crush them with its flat blade upon the bole of the tree. If the *expressed juice* of the worm does not make the bark softer, the caterpillars will eat no more leaves. Hundreds of nests may be thus destroyed in a day.

Many people think the birds will destroy the caterpillars. Sometimes they do; but few birds like these coarse, hairy creatures. They much prefer earth worms. And when they are so easily destroyed, it is hardly worth while to leave that for the birds which can be so much more effectually done by the hand.

The small August caterpillar which weaves a large web over several branches of the tree, enclosing both leaves and fruit as it progresses in search of its food, is more destructive than the early caterpillar; but its treatment may be the same. All remedies of sulphur, soot, ashes, and lime are uncertain. When you know the

worm is dead, you are certain that his ravages are ended, and these insects, like some other things in the world, have various ways to circumvent the ingenuity of traps and boluses.

CRANBERRIES.

THE cultivation of this valuable fruit has been recommended on uplands; but we do not believe in it. The cranberry is a *water* plant, and so long as there are such large tracts of natural cranberry land, which can be profitably devoted to no more productive purpose, we believe it better that they should retain their own primitive soils. In marshy lands, flowed more or less by fresh water, in a loose soil, they thrive wonderfully; and as they are a fruit always saleable in their season, and largely consumed where they can be obtained, they will continue an object worthy the attention of those who have the proper soil for them.

One, two and even three hundred dollars have been obtained from the produce of a single acre in one year! But they require care, as does everything worthy of cultivation. Yet, so mistaken have been the notions of some over-nice people, that they have, at great expense, drained a cranberry marsh, which, under proper care and husbandry for cranberry culture alone, would have yielded a net annual income of \$200 or \$300 value per acre; yet, when drained and put under cultivation for ordinary farm crops, would yield scarcely half that income, so little did they consider the value of wild fruit.

For particulars of cranberry cultivation we refer to several articles in our past volumes.

KEEP YOUR FRUIT TREES STRAIGHT.

TREES in an open exposure often acquire a leaning position from the prevailing winds. This should not be suffered beyond a certain stage of the tree. When as large as one's wrist, they should be set up erect, and, indeed, thrown into the wind at an angle of ten or fifteen degrees, in order to bring them ultimately into a straight position. This is best done by obtaining croched limbs from the woods, eight to twelve feet long, and placing the butt end, which should be sharpened, on the ground, and the crotch end either against the trunk immediately, beneath the branching point, or against a large outer limb, if more convenient, securing it from chafing in the crotch, by a padding of straw, or litter, and setting the tree at once up to the desired angle of elevation. Loosen, also, the ground on the windward side of the root so that it will not bind, and the work is accomplished.

Let this be done when the tree begins to make its summer growth, or soon after leafing out. One season, if the tree is thrifty, will be all that is required. If, however, it be obstinate, repeat the trial another year. The remedy is sure. Even large trees, which have acquired a permanent lean, may be thrown into an erect posture, by loosening the earth at the root, and occasionally cutting off an obstinate large root, without injury to its growth, and thus be made slightly. An erect tree will be longer lived, and more fruitful than a leaning one, and not half so subject to casualty as if left to its own guidance.

THE BLACKBERRY CULTURE.

Or all the berries which our land produces, none, in their season, excel the high blackberry of the northern states. Growing wild in our mountain passes and glens, among bush pastures, or by the highways, or along the fences, they produce abundantly without care or cultivation, and in certain portions of the country, they are, perhaps, the most profitable object to which the land they occupy can be devoted when a ready market exists for them. Thousands of bushels are annually brought into New York, where they find a rapid sale and consumption with all classes of our people.

But we believe they can be produced in greater abundance and of better size and quality by cultivation, and to a good profit also. In the neighborhood of Boston, they are so produced, and of a size and flavor surprising to those who have only tasted the wild blackberry of the hedge rows and pastures.

Their cultivation is extremely simple: Take good land—old pastures are perhaps the best—plow it deeply and well, drag it thoroughly, trace out deep furrows six feet apart, and plant in autumn—October or November—four feet apart in the rows, the young sprouts which grow wild in the open grounds. Cultivate them as you would corn, keeping the rows clean of weeds, and topping the bushes in spring, as you would raspberries. The production of berries will be enormous, large, and delicious in flavor, and sell for double the price of the wild. Try it, and see whether the blackberry thus cultivated will not pay.

ASPARAGUS.—As asparagus is esteemed one of the greatest delicacies which the garden affords, no person fond of it should be unacquainted with the method of producing it, if practicable, in every month of the year.

Ladies' Department.

ECONOMICAL USE OF NUTMEGS.

If a person begin to grate a nutmeg at the stalk end, it will prove hollow throughout; whereas the same nutmeg, grated on the other end, would have proved sound and solid to the last. This circumstance may thus be accounted for: The centre of a nutmeg consists of a number of fibres issuing from the stalk and its continuation through the centre of the fruit, the other ends of which fibres, though closely surrounded and pressed by the fruit, do not adhere to it. When the stalk is grated away, those fibres, having lost their hold, gradually drop out, and the nutmeg appears hollow; as more of the stalk is grated away, others drop out in succession, and the hollow continues through the whole nut. By beginning at the contrary end, the fibres above mentioned are grated off at their core end, with the surrounding fruit, and do not drop out and cause a hole.—*Anon.*

METHOD OF MAKING TOAST WATER.

TAKE a slice of fine and stale loaf bread, cut thin, (thin as toast is ever cut,) and let it be carefully toasted on both sides, until it be completely browned all over, but nowise blackened nor burned in any way. Put this into a common, deep stone or China pitcher, and pour over it, from the teakettle, as much clean boiling water as you wish to make into drink. Much depends on the water being actually in a boiling state. Cover the pitcher with a saucer or plate, and let the drink cool until it is quite cold; it is then fit to be used. The fresher it is made, the better, and of course, the more agreeable.

The above will be found a pleasant, light and highly diuretic drink. It is peculiarly grateful to the stomach, and excellent for carrying off the effects of excessive bile.

THE VIRTUES OF SAGE.

THIS valuable herb was held in such high esteem among the ancients, that they have left us a Latin verse, which signifies, "Why should a man die whilst he has sage in his garden?" It is reckoned admirable as a cordial, and to sweeten and cleanse the blood. It is good in nervous cases, and is given in fevers, with a view to promote perspiration. With the addition of a little lemon juice, it is very grateful and cooling; some choose to take it dry, alleging that the surface of the leaves of green sage abounds with animalcules, which are very visible through a microscope; and so there are in many articles of common food; but we may be

assured, even if this is the case, that as they are nourished with the sage, they are of no harm, and, at all events, a little hot water will destroy them.—*Selected.*

GRAVIES.—Gravy may be made quite as good of the skirts of beef and the kidney, as of any other meat prepared in the same way. An ox kidney or milt, makes good gravy, cut all to pieces, and prepared as other meat; and so will the shank end of mutton that has been dressed, if much be not wanted. The shank bones of mutton are great improvements to the richness of gravy; but first soak them well, and scour them clean. Taragon gives the flavor of French cookery, and in high gravies, it is a great improvement; but it should be added only a short time before serving.—*Geo. Centinel.*

TO BAKE APPLES.—Take sour apples, those of a keen acid, and to every square tin filled with them, pour a teacupful of water and one of sugar. Bake them slowly until done. Eat them with cream and the juice which cooks from them. Nobody knows much of baking apples who has not eaten them in this way. No quince, peach, pear, nor plum preserves are equal to this simple dessert.

TO TAKE OUT STAINS FROM WOOLLENS.—If on woollen from grease, scrape a little French chalk on the spot. If of paint, rub in spirits of turpentine with a flannel. If of discoloration from any acid, the color may perhaps be restored by rubbing a solution of carbonate of soda or magnesia on the part. In this case, avoid the use of soap with the water, as the former will restore the red appearance.—*Anon.*

TO TAKE MILDEW OUT OF LINEN.—Take soap, and rub it well; then scrape some fine chalk, and rub that also into the linen; lay it on the grass; as it dries, wet it a little, and the mildew will come out at twice doing.

TO PREVENT PERSPIRATION OF THE HANDS.—Ladies who work lace or embroidery sometimes suffer inconvenience from the perspiration on their hands, which may be remedied by rubbing them frequently with a little dry wheat-en bran.

CURRENT WINE.—Add three pounds of sugar to one quart of juice, and three quarts of cold water, and put in a vessel loosely corked till all sound of fermentation ceases; then stop tight, and keep a year before bottling.

AMERICAN IMPLEMENTS AT THE WORLD'S FAIR.

We observe in a recent number of the *Gardeners' Chronicle*, (an English agricultural paper from which we made a large extract last month, to give the *home* view of the subject,) that our American plows at the exhibition are sneered at, "as apparently formed to root or grub up the soil rather than regularly turn it, with short beam, handles so short as to give but little leverage power over the implement, and it may be with no coulter to cut the slice clean from the unplowed land." The Belgian one-handed plow fares worse, "and the far more primitive and barbarous wedge of the Egyptians" forms the climax in the descending grade of our self-satisfied critics. All this is in happy contrast with "the English plow, which raises and turns the furrow gradually, and which, besides the long handles to give the holder more complete and accurate control over its movements, possesses beautiful, yet simple mechanism for adjusting coulter, draught," &c.

This praise of English plows is all right enough, and well merited by the English article; but we regret that Englishmen who attempt to write on this subject, have not a somewhat more comprehensive idea of what they are about, and sufficient liberality of soul to give utterance to a well-informed judgment.

We have seen many of what are considered the best models of English plows, and while conceding—willingly, not grudgingly conceding—all the advantages claimed for their fine adaptation to English work, we must be permitted, as Americans, to claim, that in all the essential requisites of plows, whether for lightness to the team, ease of labor to the plowman in guiding, completeness in each of the requirements of plowing, as of depth of furrow, thorough pulverisation of land, and entire overturning of the sod, and covering of all weeds and grass—in all these requisites the best American plows cannot be excelled by any other now in use; and they have this further advantage, that they are sold for half the price. And if this claim is denied, we challenge the objector to the proof by any fair trial on American soil.

Our plows have not the excessive length of some Scotch and English plow beams and handles, but they have length enough to subserve most effectually, every reasonable object required, while they are vastly less cumbersome and expensive. And they do have, moreover, what is here gratuitously and falsely denied to them—every essential additional fixture of coulter, wheel, and draft rod, whenever they can be made useful. As corroborative of these assertions, it may be sufficient to state that English colonists, in all parts of the world, are purchasers of American plows. To Nova Scotia, New Brunswick, both the Canadas, the Cape of Good Hope, the East Indies, Australia, and the West Indies, we export largely of this same translated American plow, though all the habits and prejudices of their inhabitants have been in favor of the home implement, and while there is a discriminating duty against us of 20 or 30 per cent.

We had two of the best Scotch plows in our warehouse for two or three years, and although their merits were fully set forth to Scotch, English, and Americans, who had travelled in Europe, they failed to find purchasers.

There are a few cheap plows at the London exhibition, it is true, designed for cotton cultivation, on the light, sandy lands of our southern states. They are without polish, high finish, or the addenda of a heavy plow, all of which are unnecessary for the purposes required; and, although made on the best principles and of the best materials, they come at prices that one English plow will buy a dozen. Americans, it is true, use a great many indifferent plows, and there is much need of a wholesome reform in this matter. But the plows sent to the exhibition are not of this class, and they are not only entirely adapted to the purposes sought, but they are not surpassed by any others ever made.

In connexion with this subject, we take the opportunity of noticing the unmanly and vulgar flings which some hireling of the *London Times*, at the instigation of its editors, is continually making at the American department of the exhibition. Here is the leading paper of England, a paper with a respectability and patronage so overwhelming, as to command a support that enables them to pay nearly half a million of dollars annually to government for stamps and advertising duties; yet it is almost daily guilty of the unparalleled meanness and vulgarity of aspersing a friendly nation, that has been invited by these libellers to send their contributions over 3,000 miles, to aid in making up a *World's Show*, and principally for England's benefit.

Americans have had scarcely any inducement to go into this exhibition. They do not go there to seek customers, as nearly every other exhibitor has done. Their motives in this little affair have rather been philanthropic than interested. Yet England can see—and does to her sorrow and deep apprehension, and hence this ill-timed abuse—in the comparatively few articles sent, that America has not been idle for the last 75 years, at which period it was the boasted policy of English statesmen, who then ruled what are now the United States, "that not even a hob nail should be manufactured in America." But we did not go to England to measure swords in her accumulated armories. We have before met them on the ocean with our merchantmen, our packet ships, our frigates, and more recently with our clippers and Collin's line of steamers and the world knows the result. And we have before met them, too, with our lightning rods and telegraphs, and steamboats, and cotton gins, and numerous other original inventions, that have already changed the current of trade, and may, ere long, affect the destiny of nations. We shall meet them again hereafter, and perhaps at *Phillipi*, with our manufactured articles and fabrics when the wail of mendicancy may take precedence of the jibes of insolence.

We had fondly hoped that the blackguardism of the leading influences in England towards this country had ceased; but some notable evidences to the contrary have recently convinced us of our error. She tyrann

ized over us while she had the power, and she has insulted us continually since. We thought we should be treated with common courtesy in going to a World's Fair, on English ground, but the Times and its kindred echoes, has dispelled the weak illusion. The frequency and pungency of these articles, compels us to the painful conviction that this sneering hatred is grateful to the English taste. Would that Americans could show themselves men, and withdraw from a contact that is degrading. Let them cease to import from abroad what they can spare without inconvenience and loss, and we shall soon have the cringing of the *sympochant* for the taunts of the *bully*.

EXCURSION TO LAKELAND.

By invitation from Mr. Moses Maynard, President of the Long-Island Railroad Company, and Dr. E. F. Peck, whose praiseworthy and exclusive efforts have been directed for several years to the improvement of the wild lands along this road, we made an excursion on the 19th of June in company with several gentlemen of intelligence and experience, with the view of witnessing the progress of settling and cultivating this part of Long Island within the last five years. The day was unsurpassably fine, and every passenger seemed delighted with the rich and luxuriant fields of grain, and market gardens on either side of the railroad, as we glided through the counties of King's and Queen's.

On our arrival at Lakeland, after some two hour's ride, our party examined the buildings and cultivated grounds at this place, where there were seen growing in great luxuriance and promise, wheat, rye, garden vegetables, and fruits and flowers in great variety.

Lakeland, it will be remembered, is a new settlement in the very midst of the great wilderness of the island, some 50 miles from the city of New York, a region hitherto regarded by many as wholly unfit for cultivation; but the crops we examined at this place appeared equal to those on more favored parts of the island, and exhibited undeniable proof of the powers which these lands possess of producing good crops with a small outlay for amendments or manures.

We would suggest for the future guidance of Dr. Peck and other settlers on these lands, that accurate analyses be made of the soil and subsoil in order that they may know precisely in what amount of vegetable food these lands are deficient, so that they may know with certainty what manures or amendments it is necessary to apply to raise a given quantity of produce, and in order to know how to estimate, at the onset, the cost and the probable profits that will accrue.

The late Dr. Dwight, President of Yale College, and himself a keen and extensive observer of nature, an ingenious theorist, and thoroughly practical agriculturist, who travelled over this region in 1805, and visited the beautiful sheet of water, known by the Indian name of Ronkonkoma, which gives the name of Lakeland to this new agricultural site, says: "A great part of this island is still forested. Formerly four fifths of the county of

Suffolk were considered as barrens; that is, not literally, but tracts of poor land, left to nature, and regarded as incapable of useful cultivation. A considerable part of these tracts is now devoted to agriculture. Still, a great proportion of the county is a mere wood."

Great encroachments have been made upon this wild land since the days of Dr. Dwight, but there yet remains a few fields, whose proximity to our great metropolis, and natural capabilities for improvement, together with the remarkably low price at which they can be now purchased, will soon, we trust, commend them to our native farmers and intelligent immigrants.

Ronkonkoma Lake is of a circular form, about one mile in diameter, and some 80 or 100 feet deep. It is surrounded by a beautiful white gravelly beach, and is without any visible outlet. The water is pure and sweet, always refreshing and cool, and abounds in perch and a few other kinds of fish. In short, its character as a lake is *unique*.

IMPROVED COWS AND SUFFOLK PIGS.

On a recent visit to Mr. J. C. Jackson's beautiful place at Astoria, Long Island, we noticed some excellent shorthorn stock, and Suffolk pigs. The latter, Mr. J. imported direct from England; and certainly, without any disparagement to others, we must say that these are the finest pigs of the kind we ever saw. No picture can flatter them. They have only a little very fine silky hair upon them, and yet they are quite hardy and winter well. They will keep fat on grass alone. They are good breeders, excellent nurses, and make the most delicate pork and ham. The color is pure white. For a cross with common farm hogs, boars of this breed are invaluable.

At Mr. Shenfe's sale, last August, Mr. Jackson purchased the thorough-bred shorthorn heifer, Cream Pot 6th, and her bull calf, got by imported Exeter. The heifer gave over 18 quarts of milk per day for some time after calving, though only two and a half years old, and promises to be one of the greatest milkers in the country. We have no doubt she will give her 30 quarts per day, when six years old. The bull calf is growing up superbly, and shows that Exeter is a splendid stock getter. Mr. Jackson will show this calf against anything in the United States, of his age, for good size, high quality, and fineness of points.

In addition to the above, Mr. J. has three grade Durham cows, which have been averaging $74\frac{1}{2}$ quarts of milk per day, making $40\frac{1}{4}$ pounds of butter per week, the past season, which is quite as much as ten pretty good native cows have produced, which belong to one of his neighbors. Now, Mr. J.'s cows do not consume more food than five of his neighbor's cows do; and yet, for this food, he gets twice as much milk and butter. Can there be any doubt of the superior profitability of keeping first-rate cows? We think not. Mr. J.'s pastures, to be sure, are of the best kind, and so should those be of every farmer—poor pastures are as profitless as poor stock.

Foreign Agricultural News.

By the steamer Asia, we are in receipt of our foreign journals to the 5th of July.

MARKETS.—*Cotton* was still lower. *Provisions*, *Flour*, and in fact most American products, the same.

Stain for Wood Work of Stables.—Stockholm tar, heated, and applied with a brush, is a good stain and preservative for stalls and mangers.

Potato Disease.—It is stated in the London Agricultural Gazette that the potato blight has made its appearance again in England.

The World's Fair.—The present year, 1851, brings forth the great exhibition, the World's Fair, to which millions are going, and where everything is expected to be seen, and the Royal Agricultural Society holds its annual show of live stock, in the Home Park, Windsor, to add to the attractions.

Delightful Associations Connected with Gardening.—Probably there is no feeling in the human mind stronger than the love of gardening. The prisoner would make a garden in his prison, and cultivate his solitary flower in the chink of a wall. The poor mechanic would string his scarlet bean from one side of his window to the other, and watch it and tend it with unceasing interest. A holy duty it is in foreign countries to decorate the graves of the dead with flowers, and here, too, the resting place of those who have passed away from us would soon be gardens; and from that old time when the Lord walked in the garden in the cool of the evening, down to the day when a poet laureate sang—

“Trust me, Clara Vere de Vere,
From yon blue heaven above us bent,
The gardener Adam and his wife,
Smile at the claims of long descent,”

at all times, and in all ages, gardens were amongst the objects of the greatest interest with mankind.—*C. Dickens.*

Farmyard Manures.—Mr. Finnie, who lately opened a discussion before the Highland and Agricultural Society of Scotland, entered at great length into the best arrangement of a farm yard, the manure heap, and liquid-manure tank, best adapted for the collection and preservation of the shed and liquid manures. His principles, without entering into details, may be described as endeavoring as far as possible to collect the liquid separate from the solid excreta. The latter, he would interstratify with peat, where it can be had, or failing that, with soil or clay. Over the heap, he ladles the liquid manure, so as to allow as much as possible to be absorbed, and collect in the liquid-manure tank only that which cannot be obtained. Mr. Finnie, with full knowledge of the beneficial results obtained from the application of liquid manure, is of the opinion, that it will, generally speaking, be much more economical to apply manure in the solid than in the liquid state.—*Gardeners' Chronicle.*

Australian Guano.—Mr. Manning, of 251, High Holborn, transmitted to the council of the Royal Agricultural Society of England, a bag of guano received from Egg Island, one of the group lying off and about Shark's Bay, the most western point of New Holland, in south latitude 25°, and east longitude 118°. Mr. Manning stated that there were several other adjacent islands covered more or less with guano of a quality supposed to be, in some instances, superior to that on Egg Island. Rain, he said, scarcely ever fell on those islands, and in some places, the guano was found many feet deep. Mr. Manning concluded his statement by a detail of the steps that had been taken to bring about this first importation of Australian guano; and accompanied it by a hope that the council would consider the subject of sufficient importance to request Professor Way, the consulting chemist of the society, to make an official analysis and report on the value of the guano in question.

The following table by Professor Way shows the average composition of the ammoniacal guano of Peru, and the phosphatic guano of Saldanha Bay, as compared with that of the sample from Western Australia:—

	Peruvian.	Saldanha Bay.	Western Australia.
Moisture,.....	13.99	22.14	30.14
Animal matter and salts of ammonia,.....	52.61	14.90	14.75
Sand, &c.,.....	1.54	1.62	3.94
Earthy phosphates,.....	24.12	56.30	42.14
Alkaline salts,.....	8.64	5.04	9.03
	100.00	100.00	100.00
Ammonia furnished by 100 parts of each specimen,..	17.41	1.60	0.75

It is plain that this specimen of the guano from Western Australia, cannot be satisfactorily compared in respect to composition, with one supplying more ammonia; neither is it so rich in earthy phosphates as that of Saldanha Bay; and hence, is the poorest of all guanos offered in the market.

Heat of Plants.—All living bodies have a temperature peculiar to themselves; that is to say, they have a temperature different from, and independent of those that surround them. This temperature is intimately connected with their nature, and is modified according to the different conditions in which they may be. This necessary consequence of the successive changes which organic matter undergoes during life, is in its turn one of the causes which preserve organised bodies, and by which animal and vegetable life are protected from destruction or dissolution, which external circumstances would not be long in producing. It is this peculiar temperature which permits animals to inhabit regions of the globe that on account of their cold would be uninhabitable; which allows the development of aquatic vegetables in frozen water; which defends trees against winter, and which in tropical regions, causes vegetables to withstand a temperature often too high for their organisation.—*Hooker's Journal of Botany.*

Editors' Table.

PLEASE TO PAY YOUR POSTAGE.—Under the new law we prepay postage on all letters addressed to our friends, and hope they will invariably do the same in return. Forty per cent on the amount of postage will be thus saved by both parties.

ALDERNY BULL CALVES.—For some very superior bull calves, bred from first-rate imported stock, see advertisement page 262.

AGRICULTURAL SHOWS AND FAIRS.—The secretaries or other officers of State and County Agricultural Shows and Fairs of all parts of the country are invited to send us by the 10th of the present month, the dates and places at which they are to hold their annual exhibitions, in order that they may be announced in our September number.

SHORTHORN BULL CALVES.—For advertisement of some superior calves of this breed, see page 261. They are the get of the superb imported bull Exeter, of the Princess tribe of shorthorns, and their dams are first-rate milkers, giving from 24 to 30 quarts per day. Their colors vary from strawberry roan to nearly deep red. We do not know of a better opportunity to purchase, for any one wishing to obtain a first-rate dairy stock bull of fine quality.

FAIR AND SHOW OF THE NEW-YORK STATE AGRICULTURAL SOCIETY.—This exhibition will be held at Rochester, on the 17th, 18th, and 19th of September. The grounds selected for the purpose are about a mile and a half from the centre of the city, and comprise 25 acres. The location is said to be well suited for the occasion, and unusual pains will be taken by the citizens to arrange and embellish the grounds. Among other objects of interest, the mechanics of Rochester propose to erect a wooden building, rendered fire-proof by a chemical process, to which they intend to apply fire at the close of the fair to test its incombustibility.

PEACHES IN LOUISIANA.—General Felix Huston is preparing to pour into New Orleans whole avalanches of peaches. He has 30,000 trees in East Feliciana, and it is stated that he is intending to plant 50,000 more, on high clayey land, of the choicest varieties, so as to have a succession of fruit from May till November. The New-Orleans Courier says: "Dr. Stone, in whose blunt sayings there are always deep thought and sound philosophy—yesterday declared that Huston's movement was worth a thousand quarantines for the health of New Orleans. 'No more scurvy,' said the Doctor. 'Eat stewed peaches, if you would keep off indigestion. Plenty of fruit for the people, and no yellow fever!'"

"The statistics of General Huston's plantation verify this remark. Before he bought it, great mortality prevailed there. One of its former owners lost fifty negroes. He whipped his negroes whenever they were caught eating a peach, a melon, or an apple. He plants 30 acres in melons. His negroes live in the peach orchard. He whips them unless they eat the best and choicest—and this they take care to do! There have

been but three deaths on the place—and these were old, obstinate negroes, *who wouldn't eat peaches!*"

RETURN OF A TRAVELLER.—Dr. J. V. C. Smith, who held the office of Port Physician to the city of Boston for more than 20 years, has recently returned from an eighteen months' journey through various countries in Europe, Egypt, and the Holy Land. During that time, he has collected many valuable seeds, which he has very properly placed at the disposal of the Massachusetts Horticultural Society, besides an immense amount of useful information relative to the agriculture, arts, antiquities, and natural and social condition of the countries through which he passed. Among the other objects he had in view, he devoted a large share of his attention to the investigation of pulmonary diseases, for which he learned or discovered means of greatly mitigating or of effecting a final cure. We understand he is about to publish his journal, through the medium of which, his discoveries and researches will be made known.

VERMONT STATE AGRICULTURAL SOCIETY.—In pursuance of a call made by over 200 of the agriculturists and raisers of stock in this state, a public meeting was held at Middlebury, on the 16th of June, 1851, at which it was

Resolved, That a State Fair be held at Middlebury, on the 10th and 11th days of September next. The main object of the fair is to make an exhibition of our stock, our cattle, our horses, and our sheep. The public may be assured that the best specimens of Black Hawk colts, Morgan, Hamiltonian and Eclipse stock, and of French and Spanish Merino and other breeds of sheep; the best Durham, Ayrshire, Hereford and Devonshire cattle, including oxen, cows, and young Cattle. The following officers were chosen:—

President, Fredrick Holbrook.

Vice Presidents, William Nash, George Chipman, Paris Fletcher, E. D. Barber, G. A. Austin, F. E. Woodbridge, Addison county; Charles Paine, John Gregory, Roderick Richardson, Washington county; John Wheeler, L. G. Brigham, Ezra Meech Jr., Chittenden county; J. K. Hyde, Jesse Hines, Rutland county; John S. Pettibone Bennington county; Epaphro Seymour, George Campbell, Windham county; P. B. Southgate, Ebenezer Bridges, Windsor county; J. P. Kidder, J. Thomas, Orange county; A. M. Clark, John S. Foster, Franklin county; Henry M. Bates, Orleans county; Nathan Smilie, Stillman Churchill, Lamoille county; John Dewey, Essex county; Samuel Adams, Grand-Isle county; E. Fairbanks, Caledonia county.

Secretary, E. R. Wright.

Marshals, Abraham Foot, D. S. Church, W. S. Johnson.

Committee of Arrangements, Merrill Bingham, Edwin Hammond, Alonzo L. Bingham, David Hill, Seth Langdon, William Phelps Nash, Lyman P. White, Joseph Warner, S. W. Jewett.

Committee to invite an orator for the occasion, S. W. Jewett.

NEW-YORK CATTLE MARKET.

At Market.—2,400 Beeves, (southern and western,) 150 Cows and Calves, and 6,100 Sheep and Lambs.

Beef Cattle.—Prices do not vary materially from our last. Good qualities sold from 6 to 8 cents per pound.

Cows and Calves.—All sold at from \$23 to \$45—a slight improvement.

Sheep and Lambs.—Sales of Sheep at from \$2 to \$4.75. Lambs at from \$1.50 to \$4.25. All sold.

To CORRESPONDENTS.—Communications have been received from T. L. Pitt, W. E. H. Brown, J. H., Ira Allen, J. W. Pillsbury, T. S. W. Mott, R. Linsley, L. T. Talbot, Wm. H. Sotham, Commodore Jones, and John Bonner.

SUPERIOR SEED WHEAT.—A large assortment of the best varieties of improved seed wheat, among which are the Golden Australian, China or Troye, White-Flint, Hutchinson's Improved, Soule and Mediterranean.

Turnip Seed.—The Early Flat Dutch or Spring, Early Red-top Flat Strap-leaved Red-top Flat, Strap-leaved, White Flat, Early Garden Stone, Large English Norfolk, Pomeranian, White Globe, Large Flat, Long White or Cow Horn, Long Tankard or Hanover, Yellow Stone or Orange, Yellow Aberdeen or Bullock, Long Yellow French, Dale's Hybrid.

Seed Rye of the best winter variety; also, a cheaper kind, suitable for late fall and early spring pastures.

au A. B. ALLEN & CO., 189 and 191 Water st., N. Y.

SHORTHORN BULL CALVES.—For sale, two very superior thorough-bred shorthorn bull calves, got by the superb imported bull Exeter, out of two of Mr. J. F. Sheafe's great milking cows. Exeter is of the Princess tribe of shorthorns, and was bred by Mr. Stephenson, of Durham, England, and imported by Mr. Sheafe. The dams of these bull calves are celebrated milkers. For a particular account of Exeter and these cows, see the last volume of the Agriculturist, and page 151 of the present volume. Mr. Jackson, of Astoria, has a young bull, dropped last August, got by Exeter, out of one of Mr. Sheafe's cows, whose superior we do not believe was ever produced in the United States; and these calves now advertised for sale, we think equally promising.

au A. B. ALLEN & Co., 189 and 191 Water st., N. Y.

VALUABLE FARM FOR SALE in the town of Conchlin, Broome county, state of New York, containing 300 acres, with a large brick house, barn, hay houses, carriage houses, wood house, and all other necessary buildings, elegantly situated, fronting the New-York and Erie Railroad and Cochection Turnpike, and Susqueanah River, three miles from the Great Bend Depot, two miles from Kirkwood Depot, and 58 miles from Binghamton, well proportioned for wood, meadow and grain land. An orchard with grafted fruit, well watered, and is one of the best farms in the town of Conchlin. For further particulars apply to JOSEPH CONCHLIN, near the premises, or EDWARD WAIT, Montgomery Co., N. Y., or MILTON McEWEN, Warwick, Orange Co., N. Y.

au

AN IMPROVED FARM FOR SALE.—This farm lies in the town of Rochester, Ulster Co., New York, a drive of two hours connects it with the Hudson River, at Roundout. The Delaware and Hudson Canal passes through the premises, thus affording a better market for farm produce at the door than can be obtained in the city of New York. The house and outbuildings have been thoroughly repaired during the past year, which, together with the farm, are now in excellent condition. The premises are well watered, and contains thereon an excellent apple orchard of 100 trees, of 10 years' growth. Extensive beds of limestone abound in the immediate vicinity, from which good lime is manufactured, and sold at from three to five cents per bushel, thus affording facilities unequalled for improving the soil. Extensive flour and plaster mills are located at the High Falls, three miles distant from the premises. In connection with the above, a wood lot of 100 acres will be sold at a reduced price. Price of improved farm, \$4,800. Terms.—One third of the purchase money upon the execution of the deed—the balance can remain on bond or mortgage for five years.

au ASA SNYDER, Rochester, Ulster Co., N. Y.

DRAIN TILES.—The Staten-Island Drainage Tile Company are now prepared to supply agriculturists with the above-named tiles of the most approved patterns.

2-inch round pipes, one foot in length, per thousand, \$ 9
2½ Do. Do. Do. 10
3 Do. Do. Do. 12

and pipe and horse-shoe tiles of all sizes, at corresponding prices. The establishment is at Latourette's Point, Fresh Kills, near Richmond, Staten Island, and boats drawing four feet of water can enter the yard, and load from the kilns. Address
ju t A. B. ALLEN & Co. 189 and 191 Water st. N. Y.

A. G. BAGLEY & Co., manufacturers of gold pens, gold and silver pen and pencil cases, ivory and tortoise-shell holders, and patentees of the celebrated extension cases, No. 189 Broadway, New York.

TO BREEDERS OF CHOICE STOCK.—Situation wanted as farm superintendent, by a single young man, well qualified to superintend not only the out-door arrangement, particularly with reference to the breeding and management of choice stock, but also the keeping the books, accounts, &c., connected therewith. For further information, address L. G. Morris, of Fordham, Westchester Co., N. Y., who will furnish satisfactory recommendations.

THE AMERICAN MUCK BOOK, (in press,) treating of the Nature, Properties, Sources, History, and Operations of all the Principal Fertilisers and Manures in Common Use, with Specific Directions for their Preservation and Application to the Soil and to Crops; drawn from Authentic Sources, Actual Experience, and Personal Observations, as combined with the Leading Principles of Practical and Scientific Agriculture. By D. J. Browne. Price \$1.
au C. M. SAXTON, Agricultural Book Publisher, 152 Fulton st., N. Y.

PLAGUE PLOW.—No. 28.—The following extract from the letter of a gentleman who purchased one of these plows, fully explains its character. "In answer to your inquiry how I like the great breaking plow, I have to say it entirely exceeds my expectations, and even your own recommendation, which I then thought quite extravagant. I put on four stout yokes of oxen, and drove into the thickest patch of scrub oak roots upon my farm; not without some misgivings, that I should break the plow instead of the roots; but I have now turned over twenty acres as completely as though it had been nothing but stubble, and the plow is this day better than it was when it came from your store. I think it the cheapest and best plow for such heavy work ever invented."

These plows are for sale at our Agricultural Warehouse, No. 189 and 191 Water st., New York. Price, plain, \$18—full rigged, with wheel, draft rod, and cutter, \$20.

A. B. ALLEN & Co.

GREENHOUSE PLANTS, VINES AND Roses. Parsons & Co. offer for sale every desirable variety of Greenhouse Plants, and many valuable novelties recently introduced from Europe. Attention is particularly directed to their fine stock of Camellia wilderi, the perfection of whose form is not attained by any other variety. The original stock, both of this and C. Abbey Wilder, is in their possession.

Growers of Grapes are invited to examine their Vineries, now in full fruit, and from which they can furnish good vines of about forty varieties, at

50 cents for those one year old.
75 " " " two years old.
\$1.00 " " of extra size.

Their stock of saleable roses includes some thousands on their own roots of the Remoutant, Bourbon, China and Garden Roses, in their various sub-classes. Catalogues furnished gratis on application to Flushing, near N. Y. PARSONS & Co.

COMMERCIAL GARDEN AND NURSERY of Parsons & Co., Flushing, near New York. The proprietors of this establishment offer for sale their usual assortment of Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c. Their stock of Apples and Pears is finer than any they have before offered. Also, Pears on Quince, of their own growing. The Ornamental Department contains the usual well-known varieties and all the best new Trees and Shrubs for Lawns and Arboreta, including the new Pines, Araucaria imbricata, and Cryptomeria japonica, with Cedar of Lebanon, at one to two dollars each, and Cedrus deodara of various sizes, at one dollar per foot. Catalogues furnished gratis on application by mail.

ENDLESS-CHAIN PUMPS, OR WATER Elevators.—These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.

A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults of privies, where the contents are in a semi-liquid state.

A. B. ALLEN & Co., 189 and 191 Water st., N. Y.

GARDEN AND FIELD SEEDS FOR 1851. We are getting in, not only our usual supply, but a larger stock than ever, of all kinds of seeds required, either for field or garden culture, fresh and free from noxious weeds, &c., which are offered at wholesale or retail. Orders for trees and shrubbery executed as usual.

au A. B. ALLEN & CO., 189 and 191 Water st. N. Y.

LIGHTNING RODS, constructed on scientific principles, and if properly put up, will render churches and other buildings secure from the electric shock.

A. B. ALLEN & Co., 189 and 191 Water st.

HIGHLY IMPROVED ESTATES AND VALUABLE TIMBERED LAND ON LOWER JAMES RIVER FOR SALE.—The undersigned, prevented by engagements, requiring his undivided attention elsewhere, from residing on his estate, will sell, on the premises, publicly, at 11 o'clock, A. M., on Tuesday, the 23d day of September next, without regard to weather, that large and valuable body of highly improved arable and heavily timbered land, extending up the north side of James River, from the Chickahominy, a distance of more than five miles, in the county of Charles City, Virginia, well known under the general designation of "Sandy Point."

This estate lies 33 miles below Petersburg, 45 miles below Richmond, and about 65 miles above Norfolk, in what is justly considered the finest and most extensive grain-growing region of Virginia, and as healthy as any on our rivers. Spring and well water abundant and excellent. The number of acres is upwards of 4,000, of unsurpassed natural quality, of which more than 2,000 acres have been thrice lined, and are now in a high and successful state of cultivation, upon the five-field rotation; and more than 1,000 acres well set in clover. The balance, chiefly in wood and timber, embracing some of the best timbered land in Eastern Virginia, convenient to good navigation. Marl abounds on the river, and stone lime is supplied at 6½ cents per bushel.

The division will be nearly as follows, of which surveys and maps will be exhibited.

[No. 1.] "UPPER QUARTER," 841 acres, 560 improved, 281 principally in wood and timber. Buildings—a small frame dwelling, kitchen and laundry, smoke house, negro houses, &c. Barn with sheds and stationary horse power and shelters.

[No. 2.] "UPPER TEDDINGTON," The family residence, 797 acres, 540 improved, 257 principally in wood and timber. Buildings—a commodious wooden dwelling, large two-storied kitchen and laundry, ice house, new and commodious stable and carriage house, storehouse, shops, servants' houses, and every other convenient outhouse usually on such farms. Also, a new barn, part wood and part brick, with four floors, 80 by 38 feet, and a wing 30 by 50, for bolls, plaster, saw and grist mill. In the barn are two new 36-inch drums, revolving rakes, fans, sieves, and every other appurtenance for threshing and winnowing wheat, shelling and fanning corn, grinding, and sawing; all efficiently driven by a 16-horse power stationary engine, in complete order and condition. The orchards are large and stocked with fruit of every variety, of the finest quality.

[No. 3.] "LOWER TEDDINGTON," 716 acres, 564 improved, 152 principally in wood and timber. Buildings—a new framed dwelling, with 4 rooms and a passage, negro houses, a large and well-arranged barn, with stationary horse power and shelter, two large stables for horses and oxen, extensive hay house, and well-constructed buildings for the protection of wagons, carts, implements, &c.

[No. 4.] "NECK," 767 acres, 537 improved, 171 principally in wood and timber, exclusive of more than 120 acres of meadow or marl land, well located, and reclaimable at small expense.

A valuable winter fishery belongs to this farm. Buildings—a small new frame dwelling, smoke house, negro houses, stable, and large barn, with stationary horse power and shelter.

Each division has a good landing, at which wharves can be erected cheaply and conveniently. To Upper Teddington, within 109 feet of the barn, belongs a new commodious and substantial wharf, adapted to any sized vessel. Steamers pass twice a-day, and sometimes oftener, from Richmond, Petersburg, Norfolk, Baltimore, and Philadelphia.

[No. 5.] 1,200 acres of timbered land, considered the most valuable in this part of Virginia, lying on and near navigation, which will be divided in parcels of 100 acres or more.

Also, all my stock of every description, consisting of 164 head of superior improved cattle, of the Devon, Durham, and Ayrshire crosses. Among them, one fine full-blooded, and one half-blood Ayrshire bull; 210 sheep of the stock of Mr. Reynold, of Delaware; hogs; 39 mules and 3 horses—together with a large and valuable collection of implements of every variety, &c., &c.

Before the day of sale, more than 425 acres of the clover will be fallowed, and purchasers will have time and the privilege of extending the preparation for seeding to suit themselves.

Full possession of the farms given on the 1st of January next; of the timbered lands immediately.

Mr. Nichol, residing at Sandy Point, is prepared to show the property in my absence, and a particular examination is invited before the sale.

A portion of the slaves, in families only, will be sold to the purchasers of the farms, if desired.

TERMS.—For the farms, one fifth cash, the balance in five equal instalments, with interest payable annually upon all the instalments. For the timber land, one fourth cash, the balance in three equal annual instalments, interest payable annually as above. For the perishable property, a credit of 12 months upon all sums over \$100. Approved personal security upon all credit payments and deeds upon the lands, additional.

Letters of inquiry, addressed to Petersburg, Va., will be promptly answered. at 2t **ROBERT B. BOLLING.**

ALDERNY BULL CALVES.—Two very fine Alderney bull calves for sale, of the late importation by Mr. Taintor. These are from imported cows that have taken first premiums, and were considered equal to any in the Island of Jersey. at **A. B. ALLEN & CO.** 189 and 191 Water st.

LANDS ON LONG ISLAND, adjoining the villages of Lakeland and Hermanville, about 48 miles from the cities of New York and Brooklyn, by the Long-Island Railroad. The opportunity is now offered to all those who ever wish to obtain land on Long Island, the ancient "Garden of America," that will probably never occur again; for these lands are the only remaining new lands on the island, and are equal in quality, when cultivated, to any other land.

The results of cultivation on these island lands have been so great, so much beyond the expectations of any one, that they are now considered of great value for farms and gardens, and will, in all probability, be all taken up for settlement and occupation, or be held at more than five times their present price. All kinds of produce may now be seen growing there, such as wheat, rye, corn, potatoes, and garden vegetables, with fruits and flowers, in the most luxuriant growth, where but a short time since, the land was covered with trees and bushes.

The surface of the ground is perfectly beautiful, free from stone, bogs, or marshes, and the climate as healthy as can be found in this latitude. The soil is a fine loam, admirably adapted to high cultivation and great crops, and of easy tillage.

Indeed, no New-England nor northern New-York man can form any adequate idea of the difference in the labor and strength requisite to cultivate these island lands, and that required to subdue their own rugged lands, until he has seen or made the trial; and I now offer for sale as handsome land, and intrinsically as valuable, as can be found within 50 miles of the city of New York, in any direction, in lots of five acres or more, for the sum of \$25 per acre.

Any person wishing to purchase a five-acre lot of good and handsome land, without one foot of water or useless ground on it, can do so by sending \$10 as a first payment, and a further sum of \$10 a month until half is paid, when a warantee deed and good title will be given, and the remainder part of the purchase money may be paid or secured on the land, to be paid within three or five years, with 6 per cent. yearly interest. Larger lots will be sold on the same terms.

The title is perfectly good. I have a history or deduction of the title complete, certified to by legal men of the highest character, which I will send by mail, with maps, pamphlets, and all information to all purchasers, or those who wish to be informed of these island lands, by applying to

at **CHARLES WOOD, Stationer, 117 John st., N. Y.**

PATENT ZINC PAINTS.—The Zinc White Paint is rapidly superseding white lead, over which it possesses many advantages. It is whiter and more beautiful than white lead—does not turn yellow, even when exposed to sulphurous vapor, has no smell, is not injurious to health, and is really cheaper, as it covers more surface and is more durable. This superior zinc paint is kept constantly on hand, both dry and ground in oil.

ZINC BROWN and BLACK PAINTS are both weather and fire proof—the best covering for outside work ever introduced; adapted to buildings of wood, brick, or stone; fences, carriage bodies, bridges, and machinery; the hulls of vessels, anchors, chains, and all other iron work on board ship; Steam boilers, smoke stacks, and water tanks; iron, tin, and other roofing, iron, shutters, doors, and railings, wire fences, &c. For iron surfaces, this paint is especially valuable, as it forms a galvanic connection, and entirely prevents rust. May be had both dry and ground in oil.

In preparing these paints for use, when dry, they should not only be slightly mingled with oil, but thoroughly worked in with as little of it as may be necessary to give the proper fluidity, when they will cover well and give entire satisfaction. When ground in oil, they are treated in all respects like white lead.

Dealers supplied by S. T. Jones & Co., general agents for the New-Jersey Exploring and Mining Co.'s Patent Zinc Paints, No. 53 Beaver street, New York. ju 6m

VALUABLE REAL ESTATE FOR SALE.

I offer for sale my entire real estate, upon which are 35 sets of boxes; the most of which have only been in use from one to two years; with a sufficient quantity of round trees to cut at least 20 sets more; the land upon which these are situated, is not easily surpassed by any piney lands in Eastern Carolina. There is upon the premises two distilleries neatly and conveniently fitted up, with all necessary outhouses. Upon the farm, I think the buildings altogether are seldom excelled. Those wishing to purchase are invited to examine for themselves. Terms shall be low, and payments accommodating. Come and see. Any person wishing to purchase can be furnished with a sufficient number of teams and wagons to carry on both the operations of farm and turpentine, and with a year's supply of provisions.

at **JOHN A. AVIRETT, Catharine Lake, Onslow Co., N. C.**

A FARMER WANTED.—A man capable to manage a small farm, garden, and orchard, in a healthy mountain region of North Carolina, who has a wife, able and willing to take charge of milk and butter making upon a small scale, may address M. R. Singleton, Flat Rock, North Carolina. The applicant must be American, or long resident in this country. Particulars given when desired. at 3t



VAYER'S **CHERRY PECTORAL** For the Cure of **COUGHS, COLDS, HOARSENESS, BRON-** **CHITIS, CROUP, ASTHMA, WHOOP-** **ING COUGH AND CONSUMPTION.**

In offering to the community this justly-celebrated remedy for diseases of the throat and lungs, it is not our wish to trifle with the lives or health of the afflicted, but frankly lay before them the opinions of distinguished men, and some of the evidences of its success, from which they can judge for themselves. We sincerely pledge ourselves to make no wild assertions or false statements of its efficacy, nor will we hold out any hope to suffering humanity which facts will not warrant.

Many proofs are here given, and we solicit an inquiry from the public into all we publish, feeling assured they will find them perfectly reliable, and the medicine worthy of their best confidence and patronage.

From the distinguished Professor of Chemistry and Materia Medica, Bowdoin College.—Dear Sir: I delayed answering the receipt of your preparation, until I had an opportunity of witnessing its effects in my own family, or in the families of my friends. This I have now done with a high degree of satisfaction, in cases both of adults and children. I have found it, as its ingredients show, a powerful remedy for colds, coughs, and pulmonary diseases.

PARKER CLEVELAND, M. D.

Brunswick, Maine, Feb. 5th, 1847.

From an Overseer in the Hamilton Mills, in this City.—Dr. J. C. Ayer: I have been cured of the worst cough I ever had in my life, by your "Cherry Pectoral," and never fail, when I have opportunity, of recommending it to others.

Lowell, Aug. 10th, 1849.

S. D. EMERSON.

Read the following, and see if this medicine is worth a trial. This patient had become very feeble, and the effect of the medicine was unmistakably distinct:—

United States Hotel, Saratoga Springs, July 5th, 1849.

Dr. J. C. Ayer—Sir: I have been afflicted with a painful affection of the lungs, and all the symptoms of settled consumption, for more than a year. I could find no medicine that would reach my case, until I commenced use of your "Cherry Pectoral," which gave me gradual relief, and I have been steadily gaining my strength till my health is well high restored.

While using your medicine, I had the gratification of curing with it, my reverend friend, Mr. Truman, of Sumpter District, who had been suspended from his pastoral duties by a severe attack of bronchitis. I have pleasure in certifying these facts to you, and am, sir,

Yours respectfully,

J. F. CALHOUN, of South Carolina.

Prepared and sold by James C. Ayer, practical chemist, Lowell, Mass., and sold by druggists generally. ju 3t

IMPORTED DEVON BULL FOR SALE.—We intend offering for sale at the auction held on the closing day of the New-York State Agricultural Society's Show, at Rochester, in September next, if not previously disposed of, our thorough-bred imported Devon bull Megunticook, which took the first prize at the show of the American Institute last autumn.

Megunticook was five years old in April last; was bred by Mr. Baker, of Devonshire, England. He was got by Prince Albert out of a cow sired by Silfiant, and was purchased by Mr. George Turner, of Barton, near Exeter, England, in the spring of 1843, who used him one season, and sent him to us in the autumn of that year. Prince Albert took the first prize at the Royal Agricultural Society's Show, held at Southampton, and was sold to the French government for 130 guineas. Silfiant was one of Mr. James Quilty's favorable bulls, and was sold for 100 guineas. au 2t

W. P. & C. S. WAINWRIGHT,
Rhinebeck, Dutchess Co., N. Y.

NEW-OXFORDSHIRE BUCKS FOR SALE. The subscriber has a number of yearlings and two-year-old bucks which he will sell any time when called for, and has no hesitation in saying this breed of sheep is superior to all others for large carcass, heavy fleeces, early maturity, and constitution, and defies competition with all other breeds for profit. This flock, (which has been bred from some of the best ever imported,) is so well known they need no further description than to say that the sire clipped 18 pounds of washed wool, and weighed 361 pounds alive. Gentlemen are invited to call and see for themselves, or communicate by mail. Direct to
ju 5t CLAYTON B. REYNOLD, Delaware City, Del.

THE NEW-ENGLAND

Live-Stock Insurance Company,

New Haven, Conn.,

CAPITAL \$50,000,

With power to increase to \$100,000.

Insures horses, cattle, &c., against loss from death, either from natural causes, or accident, or from disease of any description.
THOMAS KENDRICK, President.

T. REYNOLDS, Secretary.

New-York agency, corner of Wall and Hanover streets, Merchants' Exchange. ju ly

SHORTHORN BULLS FOR SALE.—The subscriber offers for sale the following shorthorn bulls. They are of the Princess tribe bulls; and their equals cannot be shown in America:—

EARL OF SEAHAM, (10,181),

Deep Roan; calved April 21st, 1843; bred by John Stephenson, Esq., Wolviston, county of Durham, England; imported 1830, by A. Stevens and J. M. Sherwood; got by Earl of Antrim (10,174); dam, Primrose, by Napier (6,238); grandam, Rose Ann, by Bellerophon (3,119); great grandam, Rosette, by Belvedere (1,706); gr. gr. grandam, Red Rose, by Waterloo (2,816); gr. gr. grandam, Moss Rose, by Baron (53); gr. gr. gr. grandam, Angelina, (bred by Sir Henry Vane Tempest), by Phenomenon (491); gr. gr. gr. gr. gr. Anna Boylene, by Favorite (252); gr. gr. gr. gr. grandam, Princess, (bred by Robert Colling), by Favorite (252); gr. gr. gr. gr. gr. gr. grandam, Brighteyes, by Favorite (252); gr. gr. gr. gr. gr. gr. gr. grandam, Brighteyes, (bred by Alexander Hall), by Hubback (319); gr. gr. gr. gr. gr. gr. gr. gr. grandam, Brighteyes, by Snowdon's Bull (612); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, Beauty, (bred by Thomas Hall), by Masterman's Bull (422); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, Duchess of Atholl, by Harrison's Bull (292); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, Tripes, (bred by C. Pickering), by Sindley Bull (626); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, bred by Mr. Stephenson, of Kellon, in 1739. See 9th vol. Herd Book, pages 65 and 526). Earl of Seaham won the first prize for two-year-old shorthorn bulls at the New-York State Agricultural Show, 1850; and first prize for aged bulls, or those two years and above, of the American Institute of New York, in October, 1850.

A BULL CALF,

Red, with a very little white; calved January 22d, 1851; got by imported 3d Duke of Cambridge (5,941); dam imported Princess III., (bred by Mr. Stephenson), by Napier (6,238); grandam, Rose Ann, by Bellerophon (3,119), as in Seaham's pedigree; Rosette, by Belvedere (1,706); Red Rose, by Waterloo (2,816); Moss Rose, by Baron (53); Angelina, by Phenomenon (491); Anna Boylene, by Favorite (252); Princess, by Favorite (252); Brighteyes, by Favorite (252); Brighteyes, by Hubback (319); Brighteyes, by Snowdon's Bull (612); Beauty, by Masterman's Bull (422); Duchess of Atholl, by Harrison's Bull (292); Tripes, by the Sindley Bull, (626), out of a Cow bred by Mr. Stephenson, of Kellon, in 1739. (See Herd Book, vol. 9th, page 530, under head Rose Ann).

They are now on the subscribers farm at Auburn. He invites breeders and purchasers to see them. He can assure those who have not seen Seaham, that the portrait of him in this number of this paper, at least, is no better in any respect than he is, either in substance or style.

The above bull calf is an extraordinary one, of fine style; rich red color, with little white.

These two Bulls are of the superior Princess tribe of shorthorns, the best for milk, quality, and style, in England or America.

Purchasers desiring superior animals, can meet their wishes here; and, if they wish the Princess tribe blood, can get it nowhere except of the subscriber and Mr. Stevens, who alone, in the United States, have anything of that tribe, and they have none but those for sale. A. B. Allen, 189 Water street, New York, will give information as to prices.

J. M. SHERWOOD.

au 2t

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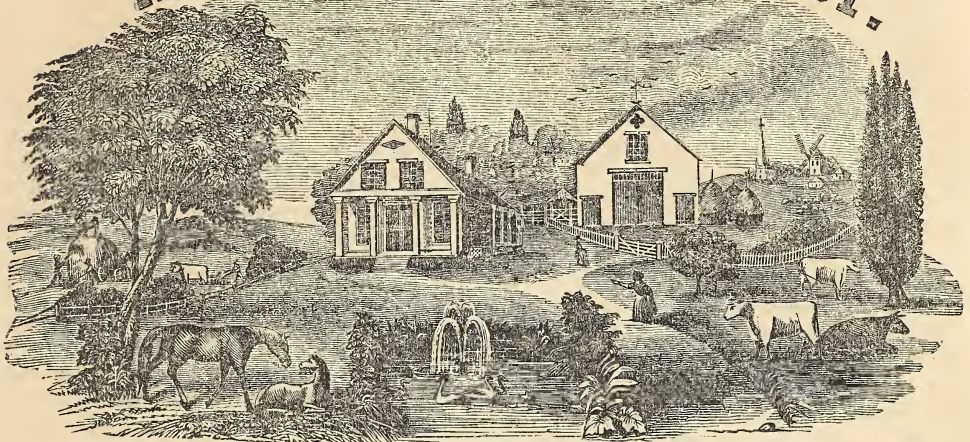
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A. B. ALLEN & CO.

AMERICAN AGRICULTURIST.



Agriculture is the most healthy, the most useful, and the most noble employment of man.—WASHINGTON.

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For general rates of postage, see first page of our June number.

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PORK—BACON—HAM.—No. 6.

THE term *antiseptic* is applied to those substances which prevent or retard the progress or tendency to decay, which is the natural condition of vegetable and animal matters when deprived of life. Antiseptics consist of creosote, the essential oils, salts, &c. The theory of their action has never been properly explained; some substances for this purpose are much more powerful than others, such as creosote and the essential oils; others, as tannin and corrosive sublimate, owe their antiseptic properties to the fact of their forming insoluble compounds with animal tissue, &c. This does not explain the *rationale* of the action of saltpetre and salt in preserving provisions. Although we are unacquainted with the actual cause of the preservative powers of salt and saltpetre, yet there are some circumstances connected with their action that explain in part their antiseptic powers. It is well known that the presence of moisture and the atmosphere are requisite to induce decay; that heat hastens and cold retards its progress. Now all the animal tissues, whether muscular or cellular, contain a certain amount of water, whilst the fluids, which are not withdrawn from the animal in bleeding, contain a large amount of water; these fluids contain several substances of a most complex nature, high atomic weight, and facile decomposition, to which the excess of moisture greatly assists. In proportion to its entire weight, none of our domestic animals contain so small a proportionate amount of muscle and tissue as the hog, the major part consisting of fat, which, from its more simple chemical composition, is less liable to decay, or becoming, as it is commonly termed, "reasty," or "rusty." This rustiness will generally be found on examination to have commenced in the decay of the enveloping or cellular tissue.

Common salt absorbs moisture where an excess is present, and yields the moisture so absorbed on exposure to a moderately dry atmosphere. These properties, in connection with the fact that salt is an agreeable condiment, render this substance, irrespective of its cheapness and general distribution, the most fitting antiseptic that can be applied. I am inclined to consider the ultimate action of salt in a great measure as mechanical, whilst that of saltpetre, (nitrate of potash,) as entirely chemical. When a quantity of dry salt is applied to pork recently killed, and thus left in a dry apartment, the salt will soon assume a moist appearance in consequence of the union of the moisture in the meat

with the salt, eventually forming a liquid called brine. If this brine and moist salt is now thrown away, and fresh dry salt applied, the whole of the moisture in the meat may be extracted with the exception of that moisture which is retained by the greater chemical affinity of the animal fibre. Meat so treated would, no doubt, keep well, but it would be excessively salt. In the course of salting meat, the animal tissues become saturated with a solution more or less strong, according to circumstances, of salt. In drying, the water in the brine is evaporated, the meat becomes to a certain extent desiccated, many of the pores are filled with and the exterior parts become covered with an efflorescence of salt; the moisture having been in a great measure extracted, combined with the presence of a considerable quantity of salt not only in the tissue but as an exterior coating, preserves the meat from the action of the atmosphere, provided it is kept in a dry place.

Salt, alone, will not give that agreeable red color so much admired in preserved meats; this is accomplished by using a small quantity of saltpetre. The change of color caused by using saltpetre is a pretty fair proof that a chemical combination takes place; a further proof is that the muscular fibres are rendered decidedly firmer when used, and when in excess, causes the muscular part of the meat to become harshly hard, or, as it is commonly termed, stringy and tough.—*Jour. Royal Ag. Soc.*

♦♦♦

SUBSOIL FLOWING.

"It is vastly strange if this is so great an improvement over the old-fashioned mode of plowing, that so few are found to practise it. In fact, nobody practises it. A few fancy farmers have tried it, with indifferent success, and the great mass of farmers have failed to be convinced of its advantages. The cost of such a process will deter them from even attempting it, unless the benefits be great and manifest."

I clip the above from a Connecticut paper, (the Sentinel of Middletown,) but hope it is not a true indication of the state of agricultural intelligence in that state, although I am aware some of her farmers are about as much in the dark ages as they were a century or two ago. To question the benefit of deep plowing, at this day, shows a lamentable want of intelligence. To say "nobody, in fact, practises it," only means a small circle of the *nobodies* of the editor's acquaintances. The sneering remark that none but a few *fancy farmers* have ever tried the subsoil plow in Connecticut, is proving too

much—it proves the mass of them are as far behind this age of improvement in agriculture, as their old bog meadows and alder swamps are behind their capabilities of production when drained, and that there is as much need of improvement in the swampy intellect of one as in the soil of the other.

PRICE AND WEIGHT OF FENCE WIRE.

WE give below a table which will show the sizes of wire in hundredths of an inch; that is, No. 4 is 0.25, which shows it one fourth of an inch in diameter. The weights given are for strands of one rod, (16½ feet, or 5½ yards,) in length, and also for one mile (320 rods, or 5,280 feet):—

Class of wire.	Diameter in hundredths of an inch.	Weight per lineal rod.	Weight per lineal mile.
No. 1	0.32	4 lbs. 2 oz.	1,321 lbs.
2	0.30	3 " 10 "	1,166 "
3	0.27	2 " 15 "	944 "
4	0.25	2 " 8 "	809 "
5	0.24	2 " 5 "	746 "
6	0.23	1 " 15 "	627 "
7	0.20	1 " 9 "	518 "
8	0.18	1 " 4 "	419 "
9	0.16	1 " 0 "	331 "

The most economical size for serviceable field fence is No. 4. This can be bought at wholesale from five to six cents a pound. Almost the only requisite in building wire fence is to keep up the tension. That built by Colonel Capron, as described in our eighth volume, page 256, is as good as it was three years ago, and never cost a cent for repair. A good durable cattle fence can be made of wire for 50 cents a rod.

APPLICATION OF MANURES—CONCENTRATION OR DISTRIBUTION.

THE following views by Mr. Charles Lawrence, recently published in the London Agricultural Gazette, are replete with good sound sense, and are well worthy the attention of American as well as English farmers. The principles herein advocated are applicable to all countries, irrespective of soil or climate:—

"I have never been able to reconcile with certain well-established facts in the growth and nutrition of plants, the very general practice of concentrating manures immediately under the seeds of our root crops. This practice appears to be extending; for I perceive our implement makers are exerting their ingenuity to contrive implements for dropping the manure; and that it has been observed repeatedly, in print, that drilling the manure is wasteful; as if that deposited between plant and plant was useless. I nevertheless adopted the practice, because, as a general rule, I think it the safer course to adopt

any practice that has been in favor with the best agriculturists, rather than follow out theoretical views, however apparently well founded. Having, however, recently attended a lecture by Professor Way, delivered at a meeting of the members of the Royal Agricultural Society, at which he entered on this subject, incidentally, in his discourse on the preparation of superphosphate of lime; and his observations having been in exact accordance with the views I had previously entertained, I am induced to recommend my brother farmers who adopt the principle of concentration, to reconsider this matter. I have a strong impression the current is running in the wrong direction, and that, on the contrary, we should be seeking the means of the most minute division and extreme distribution.

"The facts to which I have referred, and which, to say the least of them, demand careful consideration, are that roots absorb their nourishment only at their terminal points; that these extend in all directions; and as the plant increases above ground, so do the roots increase their ramifications beneath the surface, and demand a continual supply of food. I am aware it will be replied, this process is in search of food, which will be unnecessary if this be supplied ready at hand. But is this consistent with their mode of feeding, and the conditions under which their nutrition is practically effected? It is well known they cannot feed on solids, and that they receive their nourishment only in a liquid or gaseous state; that this conversion is very gradually effected through the agency of the atmosphere or water, and consequently that it is readily accomplished in proportion to the minute division of the manure subjected to those influences.

"Again, just as the first delicate roots are emitted is not the time at which they require a concentrated supply of the richest food; but their appetites and their powers of assimilation grow with their growth, and, as they increase, they require a larger supply in all directions, and that readily prepared by gradual solution and decomposition. Entertaining these views, I was much pleased to see, some time ago, a prize offered by the Royal Agricultural Society for the best manure distributor as a step in the right direction; and I cannot but think the implement makers will be more usefully employed in contriving means for minute division, and thorough and equal distribution of manures, than for their concentration. It has been a frequent matter of discussion, whether it is the better plan to lay on the manure in the autumn, and

plow it in before winter, or to do this before spring sowing.

"The foregoing considerations would lead to the adoption of autumnal manuring, immediately followed and covered by the plow, by which means, the manure would be thoroughly incorporated with the soil during the three or four months they would be intermixed. The main objection to that system was heretofore considered to be that the fertilising elements of the manure, were, in a great measure, lost by the washing of the winter rains. The observations, however, made of late years, on the absorbent powers of all soils, except those composed mainly of sand, and which have been recently demonstrated by the highly important and interesting experiments of Professor Way, have clearly established the fact that the soil has the peculiar property of absorbing and appropriating all those elements of manures intermixed with it which are essential to the growth of plants—the most valuable discovery, perhaps, in its results, for which agriculture has been indebted to science."

DRAINING LAND PROMOTES HEALTH.

We establish expensive sanatory regulations to prevent epidemics, but little is ever said in this country about draining lands to promote health.

A French gentleman, who purchased a large tract of marshy land, reduced the per-centage of sickness upon his estate from twenty to one half of one per cent. in a few years, by drainage alone. We have read a graphic account of an experiment of this kind, with similar results, in Georgia. Governor Hammond, of South Carolina, has rendered large tracts of pestilential swamp inhabitable, by the same means.

The healthiness of large districts of England, not swamp, has been greatly improved by the thorough system of underdraining lately practised in that country.

POULTRY EXPERIMENTS.

I NOTICE in the June number of the *Agriculturist*, page 193, that T. B. Miner takes exceptions to my using the word "about." My reason for doing so, was, that it might vary one or two eggs either way, not having taken the account for publication; and besides, it is the same word he uses in the introduction, by saying "about 80," &c. I have no experiments to offer until this season is past.

If your correspondent will wait, I will give him the result.

R. LINSLEY.

West Meriden, Ct., July, 1851.

THE USE OF SALT IN AGRICULTURE.

A LECTURE on the Agricultural Employment of Common Salt was lately delivered before the Weekly Council of the Royal Agricultural Society of England, by Professor Way, which elicited the following interesting observations from Professor Simonds and other members of the society:—

Professor Simonds said that "he was not then prepared to enter fully on the subject; but he might remark, as a general rule, that although different conclusions had been drawn from the use of salt, according to the amount, and under the circumstances it had been supplied, it was exceedingly beneficial in moderate quantities, but prejudicial in large ones, as a condiment for the food of animals. He was aware that it had been considered by some persons to be injurious in producing abortion in ewes and cows. His experience, however, had not led him to such an opinion; for even when large quantities of salt had been given to animals, he had not found that it exerted any specific action on the uterine system, such as that which the ergot of many grasses was so well known to exert both violently and deleteriously on those organs. He thought undue quantity of food and plethora the more probable cause of abortion. It was difficult to fix the limit in which salt should be given to animals. Professor Way had placed in his hands a tabular statement of the amount of common salt contained in various kinds of herbage, from which he had been enabled to estimate the amount of that substance constantly taken into the stomachs of grazing cattle along with their ordinary food. He showed that cart horses, feeding on meadow hay, bean meal, and bran, took in a considerable daily proportion of salt; that in other cases, the hay was salted; and that the free use of rock salt was common on a farm; while the animals thus receiving these supplies of salt were not only uninjured by its use, but absolutely benefitted in their health, gaining vigor and strength. Sheep fed on clover hay and turnips would not receive so large a proportion of saline matter, and might therefore have more salt given to them in addition to their food. Horses might take with advantage from an ounce and a half to two ounces of salt daily; but an excess of it, no doubt, would render animals weak, debilitated, and unfit for exertion. Similar facts were applicable also to oxen, which accumulated flesh faster by the judicious use of salt than without it. Arthur Young, in his examination before a committee of the House of Commons, in 1818, had

stated that he found salt to prevent the rot in sheep; and Sir John Sinclair and many others had given evidence to the same effect.

Professor Simonds then alluded to the solubility of common salt, and its passage into the stomach and intestinal canal, its absorption into the system by the veins, its action on the liver, and the supply of soda it yielded to the bile; thus leading to a greater amount of nutriment being derived from the food. Sheep, living on pastures giving them the rot, were found to recover when they had access to salt; and he thought the probable cause of sheep not rotting on salt marshes, and recovering when put on them, was the healthy stimulus thus communicated by the salt to the liver of the animals, by which that organ was guarded from disease, and its functions invigorated. Salt, too, was well known as a vermifuge, destroying many kinds of worms in the intestines of animals, and conferring a healthy tone of action which prevented their re-occurrence. He then alluded to the prophylactic or preservative influence of saline impregnation against marsh exhalations, and its power of destroying the poison of those miasmata, as shown by Dr. Stevens, in his work on the blood, where reference is made to the fact, that, at Salina, in Genesee county, near Oneida Lake, New York, all the individuals in and about some salt works, situate in the midst of a marshy district, escaped from the attacks of marsh fever, while the population around them suffered.

Colonel Challoner's attention was called to the value of salt about fifteen years ago, by the late Earl Spencer; and since that time, he had invariably used it for his cattle, which, in consequence, had attained to a better condition of flesh than they had done when no salt was given them. His Devons were the best cattle on his farm, and they consumed the largest quantity of that substance.

Mr. Fisher Hobbs had little more to state on that occasion than he had stated when the subject was discussed by the council a few months previously. He agreed with Colonel Challoner, that those of his animals which had the most salt did best, and even pined after it when it was withheld from them. He did not consider that it acted simply as a manure on grain crops; but it stiffened and brightened the straw, and caused it to ripen from two to five days earlier than it otherwise had done. In the case of root crops, it was more beneficial to mangold wurtzel than to turnips; and in fact, that great caution was required in its application to the turnip plant, which was easily injured by injudicious use, on

account of its great effect on the vitality of that plant. It increased the size of the mangold bulbs, and caused the plant to retain its fertilising character during dry seasons. He applied the pilchard-fishery salt broadcast on each side of the plants, in July, either alone, (in particular seasons,) or mixed with ashes or guano, (which improve it,) and then scarifying it. The frost had less effect on the salted than on the unsalted portions of his land; and by its means, light soil becomes more retentive of moisture, and more adherent and compact in its character. His land was variable, consisting principally of sand, gravel, and mixed soil. The fishery salt he employed was nearly of the same price as the ordinary salt of commerce, and it contained oil and animal matter derived from the fish. The wireworm died in it. In conclusion, he considered salt to be very beneficial to the soil, either alone or in a state of mixture with other substances.

The Rev. A. Huxtable was rather for leaving off salt. Those of his sheep which had the most of that substance were the least improved in their weight; in fact, one ewe, very fond of salt, had become a mere skeleton from taking it in excess. He found that his animals were much purged by the use of salt. His milch cows, however, requiring more flesh than fat, were much benefitted by it. Roots were much used by him, and he continued the use of salt with great effect as a manure for their growth; indeed, in this respect, he could not do without it, especially in the case of his mangolds and carrots, for the latter of which, being a sweet root, of which all insects were fond, it acted as a shield against depredation for these crops. He drilled it in with ashes and urine. He mixed a saturated solution of salt with dissolved bones, and found it produced a more pasty and decomposed substance. His soils were gravel, clay, and chalk.

Mr. Fisher Hobbs thought it probable that the circumstance of Mr. Huxtable's sheep being shut up when the salt was given to them, was the cause of their purging; for he had known it to be the common practice in Leicestershire some years ago, when the sheep had a purging upon them, to get them into a fold, and give each of them half a handful of salt as soon as the diarrhoea made its appearance. This practice he had himself usually adopted with success, and he believed it to be common amongst flock masters.

Hon. R. H. Clive, the chairman, when travelling abroad, had noticed in the middle of hotel yards, where relays took place, a large block

of salt, to which the post horses had free access. He considered that horses in full work derived an advantage, more or less, according to circumstances, from this substance. With regard to its effects on vegetation, a curious result had occurred in Cheshire, where the Marquis of Westminster had applied salt liberally on a road four miles long, for the purpose of destroying the weeds on it; but it was found that the weeds, instead of being destroyed by this application, were more numerous than ever.

Mr. Barrow had found salt improve the strength and quality of his wheat straw, his neighbor's crops having been laid while his stood well. He had entirely destroyed fine rows of box in his garden by applying salt on his garden walks for the purpose of killing the weeds.

Mr. Parkins had not had a weed on his gravel walks for five years, by forming them on a bed or substratum of chalk mixed with coal gas tar sifted over gravel, and allowed to set; lime being used when a more compact substratum, (capable of bearing the pressure of a loaded cart wheel without yielding,) was required.

Mr. Mechi had used 150 tons of salt on 170 acres of land during five years' occupation. He found it essentially necessary for cattle and horses, when fed on wheat straw cut into chaff with bean meal. If salt were not given, their coats appeared rough and unhealthy; but with salt, they were sleek and healthy. His sheep and pigs also had salt. Horses and cattle received two ounces daily, yearling calves one ounce. Without being able to give the scientific reason, salt gave strength and brightness to the wheat straw, and prevented its lodging. He applied it at the rate of 300 pounds per acre, mixed with the same weight of guano. He also used a large quantity under the animals, to fix the ammonia in their manure, which it did far more effectually than gypsum. He had known of great advantage from mixing it in the dunghill. It was very beneficial to mangold wurtzel. It certainly, with all deference to Mr. Way, appeared to render the land more wet and adhesive. He thought it would not be so beneficial on undrained heavy lands. Early on a hot summer's morning, he had observed the grains of salt formed a wet spot, as though they had attracted moisture from the dews.

Professor Way explained that common salt might be a better fixer of ammonia than gypsum, on account of its greater solubility. Salt, from any deliquescence it occasioned, might affect land in regard to color and resistance to

the action of frost; but moisture was not the simple cause of the good effects of salt.

Mr. Dyer instanced the deliquescent effect of salt in bacon-salting rooms, where the pavement was constantly damp. He had even known milk spilt on deal boards years ago, which now, in damp weather, always attracted moisture where the milk had been originally absorbed.

Mr. Fisher Hobbs referred to the power of the fishery salt to fix ammonia, and used it frequently with guano with a view to that object.

Baron Mertens expressed to the council his thanks for the kind manner in which they had acceded to his request, on the part of the Belgian government, that this subject should receive their attention, and give rise to practical discussion. He would only further trespass on their time by inquiring whether any experiments had been made to ascertain the increase in the weight of milch cows, and of the milk they yielded, in consequence of the use of salt as part of their food.

The Rev. A. Huxtable, having a dairy of 40 milch cows, had found it difficult to make experiments on that express point; but Boussingault had last year given an account of experiments similar in their object to those which were now the subject of Baron Merten's inquiry.

REMINISCENCES OF CALIFORNIA.—No. 1.

THAT portion of the state of California situated between the Sierra Nevada on the east, and the Pacific on the west, comprises all the sections of that interesting country, with one exception, that can be made available for commercial, agricultural, or manufacturing purposes. With the exception of the valley through which runs Carson's River, the tract of country eastward from these mountains is a barren, sandy, and almost trackless wilderness, with small oases here and there, on which the weary eye of the traveller rests with pleasure. When, parched with the burning heat of the desert, he longs for some green spot to relieve the tedious monotony. Much of this desert region has not as yet been explored, having merely been passed through, in a few places, by emigrants, whose routes were separated from each other by great intervening distances; yet, from the dreariness of every track that has thus far been tried, it may be inferred with a good degree of certainty, what those portions are which have as yet, by their very appearance, deterred the traveller, the miner, or the trapper from attempting to break in upon the secrecy of these gloomy and forbidding solitudes.

Such is Eastern California; but to one standing upon the dividing ridge between the eastern and western sections, how great is the contrast! He is, as it were, standing upon a great encircling wall formed by nature, one might almost think, to shut out from view the barren and desolate regions beyond. At his feet, flow the Sacramento and San Joaquin Rivers, with their numerous tributaries, winding through fertile vallies, and blessing with their waters a large extent of country. On the northern confines of the state, far as the eye can extend, the Klamath range rises, forest above forest, and mountain above mountain, until its highest peaks are lost in the clouds. Away to the south, the peering summits of some lofty chain are dimly drawn against the sky; and to the westward, the waves of the mighty Pacific chafe and foam against the rocky bounds which Nature has drawn for her.

Here, with the cloudless blue above, and with deep repose beneath, may the imagination lift the veil that hides the future, and glance at the destinies of this fairy land. As it runs over the wide prospect, it peoples it with thousands of busy inhabitants—sees every plain chequered with fields, and even the steep and rugged mountain sides yield to the efforts of man; everywhere, houses, gardens, orchards, and vineyards, scattered in countless multitudes over hill and valley; flocks and herds feeding on every hand; the broad highways coursing the valleys, or winding away over the hills, thronged with a busy concourse, all moving to and fro, actively engaged in the avocations of civilised life—sees villages, towns, and cities, with massive walls and glittering spires, which have risen above the mouldering huts of a departed race. It looks forward to the time, when, where now the Indian or the hardy miner, upon his jaded horse, is travelling along the narrow and solitary trail—the powerful locomotive with its heavy train shall fly along the rattling railway. Even at the present time, does reality warrant these imaginings; for, where but a short time since, was only the frail canoe of the red man, is now seen the proud steamer dashing along the noble rivers—where, so lately that ocean, which broke idly on its cragged shores, is now whitened with the sails of commerce, and amid the flags of a hundred nations our own motto and device floats proudly superior to them all—and, where, so recently, the deer, the buffalo, the elk, and the antelope roamed over these fertile plains, is seen the cottage of the husbandman, or the more humble dwelling of the herds-

man or shepherd teeming in plenty and in happy content.

But whilst beholding here a prospect that Nature herself in her farthest reachings could not improve, to which, though she would scatter with unsparing hand upon one favored spot all beauty and grandeur, she could not add one single touch; whilst taking at one vast sweep such an assemblage of grand and varied scenery, and whilst indulging in such fanciful images of the future, the traveller might revert, amid such silence and such scenes, to the far-off land of his home, and recall to his memory others, though less grand and beautiful, yet even dearer than these, might yield to a feeling of loneliness and regret when hearing there the ocean's loud roar, and seeing here the stern mountain barrier, mingling its snows with cloud and sky; both separating him from that home and from those cherished scenes so indelibly engraven on the tablets of his mind.

But let us turn from these roamings of the fancy, (however well and truly present developments would warrant us in carrying them out,) to sober reality, and take a view of California as she is at the present time, and of her fitness for the occupancy and various uses of civilised man. Of the fact that she is well adapted to support and encourage all the leading branches of industry, not a doubt can be raised, but to what extent remains yet to be seen.

Until the discovery of gold in her territory created such a universal furor, the attention of her inhabitants were turned mostly to the raising of stock, for which the mild climate and rich pasture lands of California are peculiarly adapted. Wild horses are found in abundance throughout the southern sections of the state, frequenting mostly, however, the rich interval lands bordering on the San Joaquin and Colorado Rivers, and their branches. Travelling along these rivers, these animals are found in large bands, feeding on the luxuriant clover and wild oats that fringe these streams. On the appearance of an intruder, they approach as near as caution permits, and after having satisfied themselves by close examination, they dash off across the valley at full speed; and in their course, whatever bands they come near will join in the flight, until frequently the plain is covered with hundreds and thousands, flying in a living flood towards the hills. Huge masses of dust hang upon their rear, and mark their track across the plain; and even after they themselves have passed beyond the reach of vision, the dust can still be seen, which they

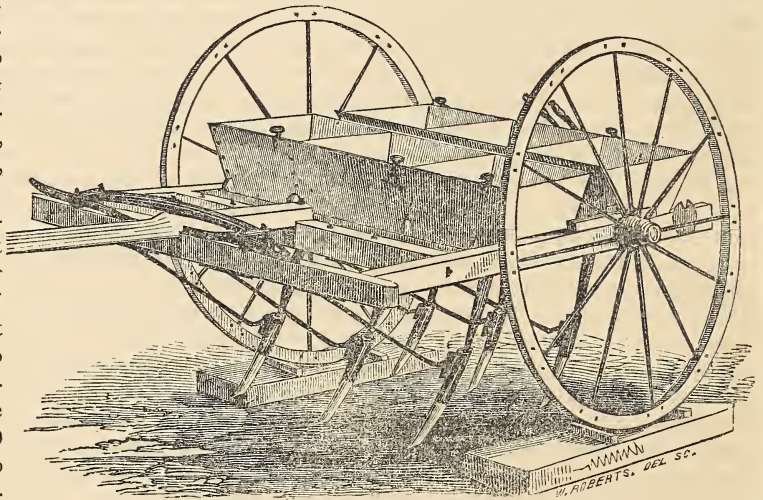
throw in vast clouds into the air as they move over the highlands. The Spaniards or natives, often capture large numbers of these horses by either driving them into an inclosure, (called a corral,) made for the purpose, or by pursuing them over the open plain, and using the lasso. When they have taken one, they confine it with ropes, saddle it, put a halter or bridle over its head, and, having loosened it, mount and ride furiously away until the animal is completely exhausted. This they continue to do until he becomes tame and tractable. These horses are of almost every variety of color, and of fine appearance; but are much smaller, and in some respects, their habits are entirely different from the same animal domesticated among us.

L. T. TALBOT.

GATLING'S PREMIUM GRAIN DRILL.

THE engraving below exhibits a grain drill, patented about two years since, by Mr. R. J. Gatling, of Indianapolis, Indiana. This drill combines the utmost economy with complete efficiency. To it was awarded the first premium diploma and silver medal, at the Ohio State Fair, last October.

This drill is so constructed that it cannot choke nor clog, either from the foulness of the ground or seed. It has been used the two past seasons with entire satisfaction. The prices vary from \$50 to \$80, according to the size and mechanical finish.



PREMIUM GRAIN DRILL.—FIG. 55.

POULTRY RAISING.—No. 6.

In my last article, I spoke of \$5 as being the price per pair for the large breeds of fowls, but that sum I find is the price of eggs per dozen! I have recently conversed with a gentleman in this vicinity, who paid \$9.50 for two dozen eggs of the Shanghae and black Spanish breeds, (one dozen each,) and he was eager to find more at the same price!

Dr. Bennett has recently sold his famous "wild Indian game hen," imported by Mr. Stockbridge, for Mr. Estes, of East Abington, Massachusetts, to a gentleman of Macon, Georgia, for \$120!!! This is no hoax. I have the proof beyond all dispute. A very common offer is

from \$25 to \$35 per pair for Mr. G. P. Burnham's celebrated "Premium Royal Cochinchinas!" These fowls are said to be of the same breed that was sent to queen Victoria, said by an Irish writer to lay *two* and even *three* eggs per day! They are splendid looking birds, truly, weighing about 20 pounds per pair.

But of all the numerous kinds of fowls now in the country, I find none more highly spoken of than the *Dorkings*; that is, the pure breed. Of this race, there is the white, and the colored Dorkings, though some writers consider the white, as the original race, and the colored, a variety. There are many fowls embraced under the name of Dorkings that are a spurious kind, caused by careless attention in breeding. Those breeders who have the colored variety of pure blood, or nearly so, consider that kind the best, inasmuch as many of them have never bred the original white breed. Dr. Eben Wight, of Dedham, Massachusetts, has the best importation of Dorkings in this country, if the praises

lavished on these fowls in all parts where they are known, be correct. They weigh about 15 pounds per pair—large plump bodies, with a full broad chest—a proud, erect, noble bird, of majestic courage, excellent layers, and good mothers.

Now this is a fowl that we need not laugh at—a medium between the two extremes. These fowls are held in such high estimation in Surrey, England, where they were obtained, that not a pair can be obtained without positive assurance that they are to be taken out of the country, and not even then, save as a personal favor to some friend.

T. B. MINER.

Clinton, Oneida Co., N. Y., Aug., 1851.

ANNUAL SHOW OF THE ENGLISH AGRICULTURAL SOCIETY.

THE great cattle show of the Royal Agricultural Society of England is now in progress at this place, having opened on Monday. The number of cattle, sheep, and swine is larger than at any exhibition ever before held, and that of horses only exceeded by one previous one.

The show of cattle, as a whole, far exceeds my anticipations. In the shorthorn and Devon class, which are the *leading* breeds here, as in our own country, the show as a whole, can hardly be surpassed. There are, it is true, as of all large shows, many animals which had much better been kept in their native stalls, than brought here; still, the show of these classes, as a whole, is remarkably fine. In the awarding of prizes by the judges, it is apparent that *fat*, not *quality*, has been too much in the ascendant. The second prize bull in the shorthorn class of aged bulls, I venture to say, would not be selected by a single breeder in England, from which to breed. He is absolutely sweltered with flesh—more in fact than any fat animal I have ever seen at Smithfield Market. In my judgment, there were several bulls, some of which were commended by the judges, far superior to him in every respect, as regards his capabilities as a stock getter. As a general rule, this disposition to award prizes to fat animals prevails, and gives, as it should, very great dissatisfaction. In the class of bulls both aged and young, I think the proportion of inferior animals is quite equal to that at our own shows.

The exhibition of cows was excellent, especially the prize animals. The cow of Mr. Booth, of Warlaby, four years and four months old, to which the first prize was awarded, was an animal of extraordinary merit, and realised, to my mind, what a pure shorthorn should be. She attracted much attention; and so far as I heard, the expression was universal, that in this award, merit had been judiciously rewarded. The class, however, in which the shorthorns appeared truly prominent, was in heifer calves not exceeding three years old, and yearling heifers. I examined these classes again and again, and I must confess that the excellence of the shorthorns never before was so fully impressed upon my mind. There was a perfection of symmetry, a fineness of handling, and an adaptation in every respect to what the perfect animal should be, that secured the approbation, as well as elicited the admiration, of all the judges

of stock who were present, so far as I could ascertain their opinions. In these classes, however, the prizes were awarded mainly to animals so fat as to be entirely unsuited for breeding, and probably, in most instances, will find their way to the Smithfield fat-cattle show instead of the breeding stalls. The number in these classes was 60, and they exhibited such marks of merit as might well, as it did, make the shorthorn breeders truly proud of their national stock.

In the class of Devons, there were many very fine bulls exhibited, and generally, they were not so overloaded with flesh as the shorthorns. The first prize bull, bred by Mr. John Quartly, of Champson Molland, was a very superior animal, possessing the characteristics of this truly celebrated breed of cattle. The first prize bull in the younger class belonged to Mr. Farthing, of Stowey Court, I consider, upon the whole, as the best Devon on the ground. He had all the fineness of bone, as well as substance that was desirable, and was truly a most valuable animal.

There were 30 cows and heifers exhibited, and the competition for prizes must have been very severe. Mr. Turner, of Barton, received the first prize in milch cows, and the first and second in heifers; and though I should have preferred Lord Leicester's cow, to which the third prize was awarded, owing to her superiority of handling, still, I presume the awards were in the main, satisfactory. There was among the cows and heifers in this class, much greater uniformity of excellence than in the shorthorns; and my impression is, that as a whole, the Devon class was the best on the show ground.

The Herefords were not in large numbers, only six cows and seven heifers. Bulls were more numerous; but the strength of the Herefords was in the cows and heifers. These were very good indeed; but if there had been selected the six best shorthorn or Devon cows, and the seven best heifers, my opinion is, that they would have maintained their superiority, in the judgment of most present who were competent to decide.

Of the longhorns, only a few were exhibited; but they were good and showed the best qualities of that breed, which, for certain purposes, even at this day, sustain them in some parts of the kingdom.

There was a fair show of Channel-Island cattle, that possessed the good qualities for which these cattle are esteemed, and many of them were of no ordinary merit.

Of the Sussex breed, resembling considerably the Devons in appearance, there was a very excellent show, and many of the cows evidenced very fine milking qualities.

Of Ayrshires, Angus, Highland, &c., there was a small show, but all were excellent representatives of their respective breeds.

A fine Italian or Roman bull, and cow and calf were exhibited by Lord Walsingham, of Merton Hall. They had enormous horns, but no special qualities to recommend them to the notice of breeders.

One of the most interesting little animals in the show was a pure Shetland bull, two years and eleven months old, with his long shaggy hair, and about the size of a very moderate yearling. He showed, however, the character of the isles from which he came, and attracted as much attention as the great overgrown shorthorn to which the second prize was awarded.

In the sheep department, the show of Southdowns and Leicesters was uncommonly fine and remarkably large. The perfection to which the breeding of these two leading varieties has arrived in this country is truly remarkable. Mr. Jonas Webb, who last year failed of the first premium on his ewes, I believe, through some means, this year, appeared in all his strength, and prepared for the show with such sheep as swept all before him, receiving the three prizes for shearing rams, and the second and third for other rams, first and second prizes for ewes; and the persons who received the other prizes were breeders from his flock. This was a triumph worthy of the most distinguished breeder in Great Britain. After an examination of nearly two days, in which I have given all the attention I could to the Southdowns, I am satisfied that in this case, merit has received its reward. This whole class contained many very fine sheep, and the competition was unusually great. The Leicester sheep were remarkably fine, and the number very large, and the competition unusually severe. A Mr. Sanday, of Holme Pierrepont, was the most successful in the reception of prizes. Not being professedly much of a judge of this breed of sheep, I still, after considerable attention, believe that the prizes were not injudiciously awarded. There were some very excellent Cotswold sheep exhibited. My own impression is, that they are quite equal, if not superior, to the Leicester, though not so numerous here.

There were some very choice Cheviots, (Mountain sheep,) exhibited. This I consider

a very excellent breed. Their mutton is fine, and a cross with the Southdown produces about as fine a lamb for the market as one need eat. In hill lands and cold climates, I presume they do remarkably well.

In swine, the show stands out pre-eminent. There were 166 on exhibition; and large and small, there were specimens I have never seen excelled, though I have seen as good in the United States. Among them all, and there was a great variety of breeds, the Berkshires, in my judgment, were the best; though they were not exhibited in large numbers, and the prizes were awarded, generally, to other breeds. In our country, I consider they have done great service; and after looking carefully at the various breeds on exhibition, I am decidedly of the opinion, that for a cross with the common hog of our country, they are decidedly to be preferred.

The show of horses was not very superior. There were some very good horses in each division; but the number of worthless stallions and indifferent mares was larger in proportion, than at our show at Albany last year, or at Rochester, in 1843. The class called hunters were the best horses in my opinion, and I think them the best in this country for practical purposes.

I was much pleased with the arrangements of the show grounds. About 14 acres were enclosed, and long sheds, with canvass coverings, were prepared for the animals, which kept them quite sheltered from the weather.

The progress of this great society is onward, and its influence upon the agriculture of Great Britain, as that of our own State Society upon our agriculture is most manifest. The meeting, together of farmers and breeders from every part of the kingdom, the show and examination of stock and implements all tend to improve the farmer and breeder, and no one, I think, can doubt that such has been the result of these organisations.

The annual dinner, with the usual number of set speakers, for no one here speaks upon the spur of the moment, takes place this afternoon, and I will, instead of writing my account, send you proof sheets of the journals, which will be issued, it may be, before the dinner closes.

London, July 16th, 1851.

B. P. JOHNSON.

The preceding letter is from the respected secretary of the New-York State Agricultural Society, who is one of the commissioners sent out by our state government, to represent it at the great English Fair held at the Crystal Palace.

CULTIVATION OF SAINFOIN.

FROM the London Agricultural Gazette, we condense the following article on the cultivation of sainfoin, a crop, we think, well worthy the attention of the farmers of the United States. We would recommend it to be sown on limestone or calcareous soils, as it is best suited for lands of that description, although it will grow on those which are gravelly and light, with proper attention to the manuring :—

“There are certain crops whose agricultural merits demand for them a more extensive cultivation than they have hitherto obtained, which deserve, on that account, special notice in this section of our journal; among them is sainfoin, which is almost as much unknown in some districts, as it is universally cultivated in others. Plants of the same botanical character, such as clovers, tares, &c., are much more general in their distribution over land of varied nature; but they are not of more importance than sainfoin to the farmer who has land suitable for its growth. On the limestone soils of the Cotswold Hills, and upon the sheep farms of the chalk formation of Wiltshire, Hampshire, and Berkshire, it was, until the more extended introduction of the system of turnip farming, almost the mainstay of the stock keeper; and even now, it is acknowledged to be of so much importance that there is a clause in many leases that a certain quantity of land shall be left in sainfoin at the expiration of the term, and that this shall be valued to the incoming tenant according to its age and quality. Sainfoin is also grown upon the chalky and gravelly soils of Herts, Cambridgeshire, Suffolk, and Norfolk. In the southern counties, and upon the Cotswold Hills, the land remains in sainfoin for a term of years varying from four to seven, and sometimes even more. The first year's growth is inferior to the second; but, after a certain time the grasses natural to the land, and the growth of seeds from the hay upon which the sheep are partly fed during winter when upon turnips, quite smother the sainfoin, and the produce deteriorates in value; but still the rest the land has for corn cropping imparts a freshness to it, which is shown in the crop, following whether of grain or roots.

The varieties of sainfoin cultivated in this country are by no means numerous; the common English sainfoin, which is natural to the chalk and limestone soils, being by far the most extensive grown, and preference is given to the variety where the land is required to be in sainfoin for several years.

Most extraordinary prices were given a few years since for seed of the giant sainfoin, said to have been discovered by Mr. Hart, of Ashwell, Herts, and introduced into notice by Mr. Thomas Hine, of Newnham, in that county, who describes it as being more rapid in its growth in the spring, and after the first cutting—it will produce in one season two crops of hay, or one of hay and afterwards a crop of seed may be taken.

The French double-cut sainfoin, as it is termed by dealers in seeds, is very generally cultivated in the central provinces of France, and a considerable quantity of the seed has been imported into this country, and sold at prices very little higher than seed of English growth, during the last few seasons. It is very similar to the giant sainfoin, growing quite as quickly, but producing a smaller quantity of leaf.

A gentleman who has grown it two years in Norfolk writes, ‘I find it early and quick in growing, both in the spring and after mowing, but I do not get heavier hay crops.’ Another of our correspondents from Suffolk, who farms an extensive tract of light and mixed soil land in that county, and to whom we are much obliged for his information, says, ‘I planted part of a field with the French double-cut sainfoin seed, and the other part with common English—the same quantity of seed, per acre, drilled at the same time; so marked was the difference in favor of the French, the first and only year I have tried it, both in thickness of plant and quickness of growth, that I let the first cut stand for seed, for fear I should loose the stock, but I got little or no seed from it. So rapid, however, was the growth after the first crop was cut, that it soon passed in length the common sort, cut long before for hay, and produced a nice crop of seed the second cut. The sainfoins here, in a general way, do not lie more than one or two years. Mine lie two, and then wheat, for which purpose I very much prefer the French; indeed, if it is succeed with me as well in future as it did last year, I should not think of sowing any other.’ From the above evidence, and from experience of their culture, the last two varieties, from their quicker growth, and from their coming sooner to maturity, may be recommended upon all highly-cultivated soils having a calcareous subsoil, the object of the agriculturist being to obtain a large produce the first and second years, and to keep the land clean and in good heart for the wheat crop.

For aught we know, the French double-cut seed may owe its quicker growth and earlier

maturity to the seed being the produce of a warmer climate, more than to its being a distinct variety, as we hear of its degenerating when grown from seed the produce of this country. If it is so, it adds another argument, so often advocated, of the importance of a judicious change and selection of seeds. And at the same time, it shows that some good to the farmer may come of the proposed repeal of the duty on foreign seeds, as the duty on French sainfoin is now a very considerable item in its cost.

GROWING RYE.

MOSES BAKER, of Tiverton, Rhode Island, grew winter rye last year at the rate of $31\frac{1}{2}$ bushels to the acre, after corn, upon ground so poor when he took it in hand, his neighbors told him he could not get the seed back again. The crop this year is still better, and he thinks equal to 40 bushels to the acre. In measuring, the half bushel was heaped considerably.

The secret of growing such a crop, where it had been considered useless for years before to make the attempt, is very important, and now made public by Mr. B.'s permission. This is it: The soil is a granitic, dark-colored loam, based upon a hard pan of compactly cemented gravel. He commenced upon four and a half acres in the spring of 1849, and by hard scraping got three or four loads of manure to the acre, to which he added 50 barrels of fish and 35 bushels of shell lime, and then put the plow up to the beam, and harrowed and plowed again and planted corn. The yield was 46 to 50 bushels to the acre. As soon as ripe enough to cut up, he removed the corn and manured with 18 ox-cart loads to the acre, (say one and a half tons to a load,) of compost, made of sea muck, road wash, sods, weeds, leaves, and every substance that will decay, even bushes, and of course, all the butcher's offal, bones, and stuff from the kitchen, &c. He plowed and harrowed heavily, and sowed in September, one and a half bushels of rye to the acre, and harrowed in smooth. Upon half an acre, which everybody said was so poor it would not sprout rye, he put 100 pounds of guano, and this made a bigger growth than the remainder. After the ground froze, so he could cart over it, he put upon each acre six loads of compost, as a top-dressing, to prevent winter-killing. At harvest, the straw was generally seven feet high, and sold, after threshed, for seven tons, bringing \$42, besides what he used, from the four and a half acres. The grain weighed $56\frac{1}{2}$ pounds to the even bushel. The stubble was turned in with ten loads of manure to the acre, and sowed

with a bushel and three pecks of seed, and afterwards top-dressed with six loads. The growth, last spring, was so rank it was necessary to feed it off, and the present crop is the wonder and admiration of that part of the country, demonstrating as it does, that the land had not *run out* for rye—it was only the owners who had run out of common sense, and expected crops without expending money or labor to fertilise or till before planting the seed.

One man, who had been a farmer 80 years, came several miles to see what he had never seen before, a crop of rye that would yield 30 bushels to the acre. How many Rhode-Island farmers will be induced by this account to put in a crop in the same way this season? Perhaps not one, except it be some book farmer from New-York city, like Mr. B., who was laughed at for supposing he could grow rye and corn upon that poor old worn-out farm.

PREMIUM FAT CATTLE.

EVER since our cattle shows have been instituted, we have been pained to see the great waste of food and time expended in getting up those enormous masses of *fat* and *grease* which are loaded on the frames of the beasts denominated at the head of this article. There is no good in it whatever, other than as showing the wonderful capacity of the creature to take on flesh—an almost dead loss to the feeder, and of little or no profit to the consumer. Tallow is usually less in price than either good beef or mutton; and when the animal is fatted to a good butcher's carcass, it has arrived at its most profitable destination. But so long as the viewing committees at the cattle shows will, regardless of cost or profit, bestow the premiums on nothing but over-fed animals, we see little chance for a reform in this matter. Indeed, we can imagine no object to the grazier nor feeder, in thus stuffing their beasts to such ungainly proportions, unless to gratify their pride in showing the creatures at the annual exhibitions and to gain a reputation, and enjoy the spectacle of seeing their cattle trucked out in ribbons, and perambulating the city streets with a band of music, followed by butcher boys, and a gaping multitude, in admiration of they hardly know what. No good housekeeper ever buys such beef for his own table; and no sensible man certainly will ever eat it when cooked, unless he prefer to make an Esquimaux of himself, and then he might fare quite as well on seal or fish blubber at a quarter the expense. We consider the whole system, from the fattening of the beast to consuming the flesh, wrong throughout.

As a test of the feeding faculty of the animal itself, such over-feeding is useless. An accurate account kept with the beast from the pasture to its final preparation for market, and the condition of its carcass when slaughtered, is the only true test of that faculty. It may be said truly, that the conditions of judgment at the cattle shows on fat beasts is, that an accurate account of the cost and manner of feeding be submitted by the owner. But every one who has witnessed these things knows that no true and unprejudicial account is ever rendered to the committees, and their judgment is consequently given in the dark, and in a majority of cases to the most expensive and unprofitable creature exhibited.

To such an extreme has this system been carried at the Smithfield shows, in England, that there is expressed a general feeling of disgust on the subject by the admirers of really good beef and mutton. The rivalry is only among the rich, who can afford to throw away 50 or 100 pounds sterling on an animal, while the profitable, matter-of-fact feeder, either shows nothing, or is driven off the field by such *practical* farmers as Prince Albert, the Duke of Richmond, Lords Leicester, Ducie, Spencer, or the score of Right Honorables who follow in their train, and who, with their huge, overgrown, and over-fed beasts, win all the prizes. No, the whole system is wrong; and while we have the power to regulate this thing as it should be in America, the mischief should be prevented by those having charge of our annual shows.

MILKING COWS.

As you have manifested some interest in my efforts in rearing up a herd of cows which should prove good and *certain* milkers, I give you a short history of my labors and results in this particular.

You know that I have been a breeder of both shorthorn and Devon cattle for the last 16 years, each in their purity, as derived from abroad. Like most of those who commence breeding fine stock, I had it all to learn, and have paid thoroughly for what little knowledge and experience I have got on the subject. As at that day, when I commenced breeding—early in the introduction of fine foreign cattle into the United States only—I had to obtain such as I could get, which were indeed among the best; but from the limited area of selection, not exactly such, in all their qualities, as I would *now* require for the objects I then had in view. I wanted a herd of good milking cows, as I had from observation

ascertained that no selections from the common herds of our native cattle could be relied on for *permanently* maintaining a high milking quality among themselves.

During the first few years of my breeding, I had some imported animals, both good and inferior milkers; and from them I bred, like animals, uncertain in their qualities. The like results followed in the crosses of shorthorn and Devon bulls upon our native cows, although I found the heifers of these crosses *generally* superior to the usual run of native cows. I soon, however, adopted the plan of using none but bulls descended from the best milking cows, satisfied that it was quite as important that the *sire* should possess the milking quality as transmitted through *his* dam and sire, as the dam herself should have to transmit, with certainty, that quality to *her* descendants. In retaining none but good heifers of the best cross, and breeding them to bulls bred only from high milking cows, I found that I was succeeding in what I desired to accomplish. Some years since, I introduced the high milking shorthorn blood of the late Mr. Bates, of Kirkleavington, into my herd, by obtaining the use of Mr. Vail's imported bulls Wellington and Symmetry, got by Wellington, out of his cow Duchess, whose heifers, almost without an exception, both through bred and grade, proved excellent milkers, and so continue. My bulls, up to the last season, have been of that stock. In 1843, I received from Mr. George Patterson, of Maryland, a yearling bull and two heifers of his fine Devon stock. His, from personal inspection, I knew to possess in a high degree the milking quality, which he had for many years cultivated in his herd. I had several fine Devons at the time, derived from another herd of an early importation; but their milking properties were uncertain. This bull, I used to my former Devon cows, and their descendants rapidly improved in their milking, while the young heifers from the Patterson cows, as well as the cows themselves, proved, every one, most capital milkers. Twenty quarts a-day, and even 24 have been drawn for weeks together from cows of that stock, and that quantity is good for any breed of cows whatever. As a matter of course, my indifferent milkers were sold off or otherwise disposed of, as the heifers matured. Although my herd has averaged upwards of 50 cows for some years past, it now, owing to less demand on my dairy, comprises only about 40, and there are but two or three in the entire lot but what are fine milkers.

During the past spring, I have had 16 young

heifers of three and two years old, thoroughbred shorthorns, Devons, and high grades, from both these breeds, which produced calves for the first time—for I have no common cattle in my herd. Every single one of these heifers having come out with fine, large, silky udders, fine taper teats, which yield their milk with the slightest pressure of the hand; and they all, without an exception, prove excellent milkers, giving, with their first calf, 16 to 20 quarts each a-day. And they will improve in their yield of milk until they are five or six years old. From my herd of cows, I am now raising 18 or 20 heifer calves, sacrificing none from so valuable a stock of milkers.

For the purpose of further improving the milking quality, if possible—retaining it at all events—and still introducing a fresh cross to invigorate their blood and constitution, I purchased at Mr. Sheafe's sale, last August, his beautiful imported bull Exeter, of the celebrated Princess tribe of shorthorns, from the herd of Mr. Stephenson, in England, and of the same stock as Mr. Bates' noted bull Belvedere, which Mr. Stephenson also bred, and from which descended the famous Duchess prize animals with which Mr. Bates has beaten all England at the cattle shows of the Royal Agricultural Society. Every thoroughbred and grade cow on my farm has been, and is to be bulled by Exeter this year. From his high quality, and fine noble appearance, I anticipate such a rare lot of calves next season as I have never yet had upon my farm. Exeter inherits in his long line of descent on the side of both sire and dam, great milking qualities, as well as other strong traits of excellence, and that he will transmit them to his descendants I can have no doubt.

Looking also to the continued improvement of my Devons, I have this year secured the services of one of the two fine young bulls selected and imported last fall by that excellent judge of stock, Mr. Ambrose Stevens, from probably the best Devon herd in England, famous, also, for their milking as well as breeding qualities. From these accessions, I anticipate most satisfactory results, and with a continued attention to the best selections of bulls to my already, as I think, well-established herd of milkers, in both my Devons and shorthorns, I hope to continue a race of dairy stock equal to any ever found, as a herd, on either side of the Atlantic.

From my remarks being chiefly confined to the milking qualities of cattle, it may be inferred that the fattening or beef properties of the animal are sacrificed. Not at all. This is still

preserved in its highest perfection, as the unrivalled *handling* of these high-bred animals prove. No animal with such a *touch* can be otherwise than a good feeder, and the rapidity with which the cows, when dried of their milk, and put upon good feed, will take on flesh, is the highest evidence of their capacity, in due time, for the shambles. LEWIS F. ALLEN.

Black Rock, N. Y., August, 1851.

RABBITS FOR MARKET.

It is a matter of surprise to an American first visiting England, to see the quantities of game which abound at certain seasons of the year in the London and other markets of that country, in contrast with the scanty, or rather no supply at all, existing in the markets of American cities. The reason for such difference, is, that in England, Scotland, Wales, and Ireland, every acre of the soil is appropriated to its most profitable uses, while we, from the abundance of land in America, select only the best for agricultural purposes, and let the remainder go barren and uncared for. Lands appropriated to the rearing of game, when fit for farm pasturage or tillage, is unprofitable, generally, with us; but there are thousands of acres in this state, and in New England, barren for other purposes, that might be devoted to the breeding and pasturage of rabbits, and which, by thus appropriating them might be turned to profitable account. All the preparation required is, to inclose it with a high and nearly close paling fence, and the erection of a few rude hutches inside for winter shelter and the storage of their food. They will burrow into the ground and breed with great rapidity; and in the fall and winter seasons, they will be fat for market with the food they gather from the otherwise worthless soil over which they run. Rocky, bushy and evergreen grounds, either hill, dale, or plain, are good for them, wherever the soils are dry and friable. The rabbit is a gross feeder, living well on what many grazing animals reject, and gnawing down all kinds of bushes, briars, and noxious weeds.

The common domestic rabbits are probably the best for market purposes, and were they to be made an object of attention, immense tracts of mountain land in New Jersey, and the New-York and New-England highlands could be made available for this object. We hope some of our friends who are over burdened with land now turned to no profitable object, will give this subject a thorough trial, and we think they will find their account in it.

Some may think this a small business. So is making pins, and rearing chickens and bees. But there is an abundance of people, whose age and capacity are just fitted for it, and for want of other employment are a charge upon their friends or the public; and now, when our cities and large town are so readily reached by railroads from all parts of the country, our farmers should study to apply their land to the production of everything that will find a profitable market. Things unthought of, a few years ago, now find a large consumption in New York and other cities by the aid of railroads; and we know of no good reason why this production and traffic should not continue to an indefinite extent. When the breeding of rabbits is commenced, get a good treatise on the breeding and rearing of them, which you will find at C. M. Saxton's, publisher of the *Agriculturist*, at 152 Fulton street.

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A LETTER FROM NORTH CAROLINA ABOUT
ABOLITIONISM.

I HAVE just received your June number, and find it as usual, full of abolition—practical, beneficial abolitionism—the *abolition of old notions and worthless tools* among farmers. I am really surprised to find such a red-hot abolition, disunion publication so eagerly sought after by my southern neighbors. I say *abolition*, for, our old modes of getting along here will soon be totally abolished. I say *disunion*, for I expect shortly to see an attempt made at disuniting the surface of the earth to a depth which, not more than two years ago, would have been considered as the work of some farmer "gone mad." Such were considered my first attempts to plow eight or nine inches deep. We look upon the *Agriculturist* as an abolition paper, which is working wonders towards abolishing old-field pines and broom-straw fields from North Carolina. Worn-out land will soon be worn out of existence. Our present race of cattle, improved—abolished—by amalgamation with a better kind—they could not be worse—indicating as they do a cross of goat and bison. Such abolition as this, is a consummation devoutly to be wished. The very contemplation of such a prospect is gratifying to North Carolina.

We have been visited by your travelling agents, Mr. Robinson and Mr. Sherman, and should like to see them again. Such visits set people to talking, and induce them to read, and then they begin to improve.

Cutting potatoes will not prevent the rot—I have tried it. You say almonds may be grown in North Carolina. Can we plant the common

nut, and grow them? [Yes, the hard-shelled almonds.] Will nutmegs grow here? [No.—Eds.]

The mean character I have given to our cattle generally, does not apply to all. There are some of the Devon and Kerry breeds, which are hard to beat. I have a cow of the Devon blood, from which 20 to 24 quarts have been milked in a day.

Wishing you great success in the speed of your abolition principles and tools to accomplish that purpose, I am your agricultural friend,
JOHN ROBINSON.

Black Creek, N. C., June 9th, 1851.

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LARGE COW.

WHEN you say Grace was the fattest cow ever killed in this country, and also assert it is *undoubtedly true*, I must remind you of a cow sold at Brighton, in 1844. A Hereford cow, eight years old, weighed on the scales at Albany, 2,313 pounds alive. When put on the scales again at Brighton, she weighed 2,297 pounds, and was sold by Mr. Bennett, salesman, to a butcher in Boston, for \$150. She was shown in Boston, (tickets one shilling each,) for upwards of a month, and then killed. Her beef was admitted to be of the best quality ever shown in that market, and the owner, to his sorrow, exhibited the quarters round the city on a warm sunny day, and spoiled the whole of it. *This is undoubtedly true*. I never ascertained what was her dead weight, but I *know* there was as small a shrinkage as in any beast ever bred.

Mr. Bennett, of Brighton, can give you a better description than I can, as he knows the purchaser, and can probably give you her dead weight.

W. H. SOTHAM.

Black Rock, June, 1851.

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PIE PLANT.—September, in the middle states, is the month for transplanting the roots of this most valuable article of food for the farmer's family.

"To raise it in perfection, trench a piece of ground about two feet deep, turning in the strongest manures to be had, at the rate of a barrowful to every square yard. Set the plants two feet apart, and you will have stalks as thick as your arm, and so tender as scarcely to sustain their own weight. It is the greatest feeder of all kitchen plants; and this is the reason why we see the great bulk of that sold in the markets small, tough, and flavorless—the plants are starved."

RICE HULLERS AND POLISHERS.

THESE machines, which are constructed so as to be driven by hand, horse power, or by steam, will hull and polish from 50 to 250 pounds of rice per hour. After the rice comes from between the stone and India rubber, it passes over a screen, and the meal, or fine powder, that wears off the kernel, runs through the screen into a box. The rice is then carried through a spout where it is exposed to a draft of air which blows off all the chaff, dust, &c. It then passes into a conical cylinder made of wire cloth, inside of which is a cone made of brushes that rub off the thin film of the rice, giving it a clean bright color. It then receives another draft of air which blows off the refuse dust

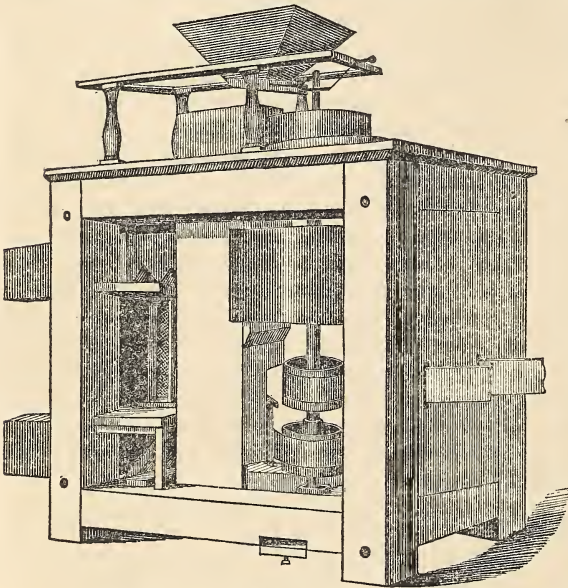
more rice to a bushel than can be done in any other machine.

4. The largest-sized machine is portable, weighing only about 600 pounds when set up.

These machines are constructed of various sizes. Some may be driven by one man, while others require a four-horse power engine. The prices vary from \$80 to \$600.

HUMBUGS AND IMPOSITIONS OF THE DAY.—No. 1.

As the tippler said by his glass of grog, this *Yankee nation* of ours is "a great institution!" No doubt of it, whatever. A Yankee myself, I have a right to talk on the subject, and I feel just at this minute somewhat inclined to talk pretty freely. The world is full of empiricism—it always was for that matter—but in past times, it has been chiefly confined to trade, science, arts, and theology. Yet of late, as the rising sun of investigation has begun to stimulate agricultural inquiry, the universal hosts of impostors and quacks seem to have jumped into the centre of that subject also, and laid the farming world under the same system of contribution to their avarice and impositions, as their prototypes have done with the other professions. It may be an unsavory subject to some of your readers, nevertheless, our duty to the public demands an exposure of agricultural as well as other humbugs; and as I have one or two in my eye just now, I hope you will permit me a little free talk on one at least of them in your independent journal. In all professions there are, and ever have been men of high purpose, exalted views, and expanded, benevolent



RICE HULLER AND POLISHER.—FIG. 56.

through one spout, and the rice is delivered through another, perfectly free from meal, dirt, or chaff.

These machines will also serve for hulling and polishing coffee, and gives it a clear, bright color, very much improving its appearance and rendering it cleaner than can be done by any other process. Dull or damaged coffee, in passing through one of these machines, may be increased in value from 20 to 50 per cent.

The advantages of these machines over all others are as follows:—

1. They will not break nor crack the rice as is usually done by other machines.

2. They give a superior polish.

3. They make from three to five pounds

hearts, ready to forward improvement in every branch of their calling, and doing great and signal deeds of benefit to their race. These deeds have been accomplished in fostering and aiding ingenious invention in the production of new and improved implements and machinery; the introduction of new, rare, and valuable seeds; the importation of improved domestic animals, and numerous other acquisitions in aid of labor, productive, or otherwise, to the substantial and lasting benefit of our agriculture. Nor have these benefactors been confined to the agricultural profession alone. Merchants—perhaps the most liberal and humanising in their influences, of all our industrial pursuits—have liberally disbursed thousands of their wealth in these valuable objects, and men engaged in other pro-

fessions have been unrequited benefactors to the agriculture of their country.

Such, however, are not those who are to favor the subject of my present writing. Getting hold, by hook or by crook, of improved farm stock chiefly, after their merit has been tested by intelligent men, a certain class of *cute* people set about *benefiting* the agricultural world with their *improved* animals. Of these we shall only enumerate a few—as *the run* may for the time have happened to be; and, first,

The Morgan Horse.—This, according to the general received notion of the creature, is a snug, compact, spirited, pony-looking horse, of 13½ to 15 hands high—an *accident* in his origin—named from the owner of the first of his kind; the *true* pedigree unknown, but given in a half dozen different phases by those who had it from “Old Squire Morgan” himself. This class of horses hail from Vermont, and some 40 years ago, the original stock being only *one* in number, and he a stallion. But so prolific has been the progeny of this *one* stallion, that at the present time, according to the *printed* authority of sundry agricultural and other papers and handbills, there are at least several hundred “pure-blooded Morgan stallions” standing, to say nothing of the number of like-blooded colts for sale, all over the country, from Maine to Texas; thus showing themselves a most remarkable breed of horses in more than one particular, as other breeds or races of animals usually show their *pure* descent from a dam as well as a sire. Indeed, such a universal modification of quality do these remarkable animals possess, that there may now be found “pure-blooded Morgans,” from the original pony size of 14 hands, oftentimes to 16 hands high, and of the breadth of a cart horse, “*got direct from the original stock on both sides*,” and so extended is the benevolent spirit of their propagators, that about the season of the annual cattle shows, their cute visages are seen on sundry steamboats, railroad cars, and along the highways throughout the northern states, with tasselled bridles and gilt trappings, perambulating from one point to another in the exhibition of their wares to the gaping multitudes on the “fair” days. All these pretensions to blood, pedigree, &c., are most conveniently verified by affidavits and certificates, duly acknowledged before the Vermont and New-Hampshire Squires, who seem to have adopted a patent-right model of the kind for the accommodation of their customers. Each of these “unrivalled” horses, too, are the “*last one*,” and indeed “the *only one* to be had in the neighbor-

hood where he was raised;” but it so wonderfully happens, owing no doubt to the *peculiar fecundity* of the tribe, that the succeeding year another swarm, equal to the last, or *larger*, indeed, if the demand be *urgent*, is thrown off from the same prolific hive, where “not a single critter of the sort” was left to mark the “last of a mighty line.”

Reflections, as our good old parson used to say in his sermon, when I was a boy. The *real* Morgan horse is a snug, compact, well-made beast, with a good deal of spirit, and rather pretty action about him, and may be found anywhere in the northern states where that style of horses is in vogue, comprising partly the Canadian-French horse, a dash of the turf horse, and the balance made up of the common country mare. One of the best horse jobbers we ever knew in Massachusetts, (and he was a man of honor,) told me that he sent six mares to a famous Morgan stallion in Vermont, and he hoped that out of the whole six he could get *one* Morgan colt! A pretty commentary on the *surety* of the Morgan blood in transmitting its qualities! But, the Morgans must have their day, as the proverb has it with the dog, and so long as their owners will pay for puffing and advertising, so long will the flunkies in the world at large contribute to *vive la bagatelle*.

VERMONT.

REVIEW OF THE JULY NUMBER OF THE AGRICULTURIST.

THE leading article in the July number is *Carrots and Parsnips—Substitutes for Potatoes and Field Crops.*—Field crops, I object to. I am much in favor of root crops for winter-feeding stock, and while disease prevails in potatoes, other roots may well be substituted for them; though I have never found any other roots upon which stock could be fed with the same expense, for the same amount of nutritious food. Substituting roots for other field crops is an error which American farmers often fall into, particularly upon the rich lands of the west. Where corn and oats are not worth more than 15 cents a bushel, and hay two or three dollars a ton, and straw nothing, carrots, parsnips, turnips, or any other roots, are poor substitutes for such field crops. They may, yes, and should be raised in small quantities, as luxuries for the animals, but never as substitutes for those cheaper kinds of food. Here, in New England, we can sometimes feed stock upon roots cheaper than upon any other feed, if planted upon richly-manured and deep-plowed soil—not otherwise.

Pork—Bacon—Ham, No. 4.—I have the same objections to this as No. 3—the directions are all for England and will not be adopted in this country. [All true enough, but we publish these papers to show our farmers how other nations manage; and besides, they will suggest improved methods to them, perhaps.—Eds.] In the first place, there is no difficulty in saving hams from decay and fly blows in the United States, if there is in England. There, they depend upon salt alone; here, smoke is our great preserver of bacon. If the ham is put up in canvass and whitewashed, or even loose cotton bags drawn over it as it hangs, it may continue to hang, and will keep perfectly sweet for years. English instruction to us how to cure bacon we have no use for. [We think differently, if the hams are to be exported to England; for if not put up in their style, they will not give near so much for them.—Eds.] The direction to render lard in water is one that may be followed by those who like it. I never shall, because it is wrong.

Meadow Lands in North Carolina.—Where? Some mistake here. Sow grass in North Carolina? Will it grow there? Yes, after the hogs root up the land in digging up the roots, and work it deeper, and prepare it better than it is usually done by the miserable system of plowing, which generally prevails there. To grow grass anywhere, the land must be tilled, not scratched about two inches deep. Take pattern from the pigs, and plow deeper. Buy better plows, and use them. Sow grass seed, manure the land, and make hay.

Steaming Potatoes.—"The secret of steaming potatoes is very little understood." That is a fact, particularly when cooking for human food. Human ingenuity might be taxed its utmost to invent modes of cooking that would produce as much bad food as the miserable manner in which half the potatoes eaten in this country are cooked. Go dine at a public table and look at the sodden, water-soaked things called boiled potatoes. Not one person in ten knows how to cook this plain, simple dish.

Poultry Raising.—There are some sensible facts in this little article, one of which is that poultry raising is not so very profitable as some fancy breeders would induce us to believe (if we buy our stock from them). This writer says the small varieties are much the best for eggs. No doubt of it. And there is another secret worth knowing. Eggs are sold by the dozen, big or little, generally all of a price. Which will cost the most?

Cultivation of Flax.—What a fortune every farmer can now make, (on paper—flax paper,) if there are not too many *ifs* in the way.

Field Rollers.—A short truthful article. The use of a cast-iron roller, which costs, perhaps, \$75, will often pay for itself in the increase of one crop.

Thorough Drainage.—A sentence never understood in America, much more carried into practice; and yet, it would often double the value of the land over and above the cost of the work. Pray, read the last paragraph of that article again. See what draining does for land.

Analysis of Soils.—There is one very remarkable feature in this analysis of Dr. Blake's soil, upon which he had applied 80 bushels of lime to the acre; that is, it only shows 44 per cent. of lime in the soil and 80 per cent. in the subsoil. It shows that there was sufficient lime already in the soil, and that it was useless to apply any. These tables of analysis are highly valuable, and it is truly surprising why farmers do not avail themselves of the cheap facility they now enjoy of having a correct analysis made of soils from the principle fields they have in cultivation.

To Kill Lice on Poultry.—With onions? Who ever tried it? Don't believe it, I don't. [But others do who have tried it. They inform us it often kills them.—Eds.]

Horticultural Department.—Here is an old hand at a new trade. I shall wait a little till I can find what tack he sails worst upon, and then run aboard of him.

Ladies' Department.—Glad to see it again, if it is half chicken feed. Now for pity's sake, Messrs. Editors, don't give us anything more about hens and chickens for three months, at least. Here are three articles upon this subject in one number, which is a little too much for easy digestion. I am fond of chicken, but don't like too much stuffing. [Pray, Master Reviewer, don't you know that the fever is pervading the country, and must have its run?—Eds.]

Review of Professor Johnston's Travels.—Probably very just criticism, but a little too long for your journal, I am thinking.

The World's Exhibition.—The greatest building in the world, covering the greatest humbug ever conceived by any great showman. [Don't be in quite so great a hurry with your opinions, Captain; you will see good results from this yet. Large orders to American mechanics have already been given, and more doubtless, will shortly follow.—Eds.] America has burnt her fingers in it.

REVIEWER.

THE SWEET AND SOUR APPLE.

An apple of this variety has been frequently noticed in pomological works, together with sundry reflections upon its origin; and the *cause* of why one part of the same apple should be sweet and another part sour, with divers propositions for the solution of the question. Some, indeed, consider the fact itself apocryphal. Still the apple exists. Thirty years ago, we saw a tree bearing such apples, and ate of the fruit, in Northborough, Massachusetts. It was a graft, and descended, by one or more rumors, according to family tradition, from the original tree of that variety, which originated in Petersham, in the county of Worcester, in that state. And as it may be interesting to pomologists, we give the history of the original tree, as recorded in a book, now out of print: The History of the County of Worcester, by Rev. Peter Whitney, of Northborough, printed in 1793.

In his history of the town of Petersham, the historian remarks: "The land in this place is exceedingly favorable to the growth of all kinds of fruit trees, being high and warm; and here are large and excellent orchards, and much cider is made here, beyond what the inhabitants consume; but they find a ready market for the surplus in the newer settlements. Having mentioned their fine orchards, I would duly notice one very remarkable natural curiosity relative to this subject. There is now growing in an orchard, lately belonging to my honored father, the Rev. Aaron Whitney, deceased, an apple tree, very singular with respect to its fruit. The apples are fair, and when fully ripe, of a yellow colour, but evidently of different tastes, sour and sweet. The part which is sour is not very tart, nor the other very sweet. Two apples growing side by side, on the same limb, will be of these different tastes, the one all sour, and the other all sweet. And what is more remarkable, the same apple will be some sour on one side, end, or part, and the other sweet; and that not in any order nor uniformity; nor is there any difference in the appearance of the one part nor the other. And as to the quantity, some have more of the acid, and less of the sweet, and so *vice versa*. Neither are the apples so different in their tastes, peculiar to any particular branches, but are found promiscuously on any and every branch of the tree. The tree stands almost in the midst of a large orchard, in rich and strong soil, and was transplanted there about fifty years ago." [Petersham was first settled about the year 1735, and the Rev. Aaron Whitney, father to the historian, was installed as a clergyman, in 1738.—Eds.]

"There is no appearance of the trunk, nor any of the branches having been ingrafted, or inoculated. It was a number of years after it had borne fruit, before these different tastes were noticed; but since they were first discovered, which is upwards of 30 years, there has been constantly the same variety observed in the taste of the fruit of this tree. For the truth of the above account, an appeal may be made to many persons of distinction, and of nice tastes, who have travelled a great distance to view the tree and taste the fruit; but to investigate the cause of an effect so much out of the common course of nature, must, I think, be attended with difficulty. The only solution I can conceive is, that the corcula, or hearts of two seeds, the one from a sour, and the other from a sweet apple, might so incorporate in the ground, as to produce but one plant, or that farina from blossoms of those opposite qualities, might pass into, and impregnate the same seed. But, leaving this to the discussion of naturalists, I proceed with a description of Petersham."

Thus, in the quaint, rich and distinct language of the reverend historian, is given the origin of probably the only tree of the sweet-and-sour apple, from which this singular variety has been disseminated. The tree, and several specimens of the fruit, which we examined, and tasted, was identical with the above description; and it appears that the cause of the peculiar qualities of the fruit was then as difficult of solution as now. The separate flavor of each was pleasant and palatable, but dashed in unequal proportions upon one part or other of the same fruit. One might as well have a cut from two different apples, sweet, and sour in his mouth, at the same time, so far as the enjoyment of flavor was concerned. Of course, the fruit of this remarkable tree was desirable only as a curiosity. Other trees of a similar character also exist in different parts of the country.

THE HEAVIEST WHEAT PRODUCES THE BEST FLOUR.—It is well known among millers that the strength of flour and its fitness for making good bread is due to the gluten contained in it and corresponds to a considerable extent with the weight per bushel. Hence, in general, the greater the weight per bushel, the better the flour; yet, a low weight per bushel does not always prove a sample to be inferior; on the contrary, a specimen having a high weight per bushel, may frequently be inferior in actual weight; that is, contain less gluten than another kind of wheat of comparatively low weight per bushel.

THE DAIRY QUALITIES OF SHORTHORN COWS.

IN some hasty remarks on this subject in a preceding number, we said in relation to the constantly-paraded produce of the Oaks and the Nourse cows, "that we can show in many shorthorn herds, numerous instances of larger yielders whether of milk or butter." We had an impression that many results were on record to verify this assertion, but on recurring to written authorities we found our convictions had been formed upon *oral* testimony rather than the more formal and documentary. But since the Albany Cultivator, in its zeal for upholding the *natives*, has challenged us to the proof, we must call its attention to such brief authority as has, on a moment's investigation presented itself.

Youatt says "that one of Mr. Calvert's shorthorn cows yielded 373 pounds of butter in 32 weeks, during which time she was lame for six weeks from foul in the feet; and that during the height of the season, she gave 28 quarts of milk per day, which, (in a week,) yielded 17 pounds of butter." Had this rate been continued for 52 weeks without deducting anything for the disadvantage of the lameness, she would have given 606 pounds; and without the accident, probably 630 pounds.

The same author gives the yield of what he calls a Holderness, at the Earl of Chesterfield's Bradley Hall Farm, (but which we are assured from one who has visited the place and made particular inquiry on the spot, was a pure shorthorn,) that gave, in the best of the season, 29 quarts of milk per day, from which 38½ ounces of butter were made.

Colonel Powell's shorthorn cow Belina calved in September, 1830, and from about the 20th of that month to the 20th of May following, a period of eight months, she made sometimes as high as 18, and never less than 14 pounds of butter per week, averaging over 16 pounds during the whole of this period. She was dried off as rapidly as possible after May, to recruit, her progeny being of more consequence to her owner than either milk or butter. Here was actually produced 554½ pounds in eight months, and at the rate of 832 pounds of butter for the year. The milk from this cow was so rich, that the butter could always be brought by simply stirring the cream with a spoon. This cow yielded 20½ pounds of butter in one week.

Mr. Sheafe's shorthorn cow Lucilla, in June, 1844, gave 337 pounds of milk in one week, which produced 15 pounds, 3 ounces butter.

Her food was grass only. See American Herd Book, page 198.

Mr. Vail, of Troy, writes us, that "one of his cows made 52½ pounds of butter in 30 days, and in two days yielded over 92 pounds of milk. Another cow gave 34½ quarts of milk, (wine measure,) in one day, and 19½ pounds of very choice butter in one week. Both of these cows had nothing but grass pasture during the trial, and very ordinary keeping previously."

Thus, a thorough-bred shorthorn produced over 2 pounds, 12½ ounces of butter per day, which rather exceeds the quantity yielded by the Oaks cow, and this, be it remembered, was on *grass alone*. It is true that the trial did not continue so long as that of the latter; but there is no doubt had Mr. Vail given her the same feed as the Oaks cow had, she would easily have beaten her, either on a long or short trial. Mr. V.'s butter was *well worked*, and of the *best quality*. How it was with that of the Oaks cow, the records do not say; but all know, that half a pound of buttermilk can be easily worked out of 2½ lbs. of what some very honest housewives would call good butter.

Colonel Sherwood, of Auburn, has an imported shorthorn heifer, which, at four and a half years old, with her second calf, gave in May last, 14⁹/₁₆ths pounds of butter in six days, which is 17 pounds per week. This was on grass only, and before it had acquired its full nutritive qualities, and while still diluted with the thin, exuberant sap of early spring. On a second trial, she gave 1,111½ pounds, (say 556 quarts,) of milk, from 20th May to 19th June, which made 60½ pounds of butter. In the July number of the Cultivator, one of the editors says: "We had several opportunities of testing a sample of this butter, and it was of superior quality."

Mr. Francis Bloodgood, of Albany, had an imported shorthorn cow, in 1835, which gave 33½ quarts of milk per day. Mr. Canby's shorthorn cow Blossom, gave an average of 35 quarts per day for a week, yielding 13½ pounds of butter.

Dr. Martin, of Kentucky, owned a shorthorn cow, that, in clover and blue grass pasture, is said to have yielded—the doctor himself being the authority—41 quarts of milk per day for three weeks in succession.

Cyrus P. Smith, Esq., formerly mayor of Brooklyn, N. Y., had a full-blooded shorthorn cow, that, in September, 1841, gave 34½ quarts strained milk in one day, and 34½ and 34 per day subsequently; and for three months in succession, gave not less than 32 quarts per day. From

the 8th of September to the 8th of July following, a period of eight months, including all the winter, the average quantity of strained milk was 27 quarts of per day. The quality of this milk was excellent.

Mr. Schenck, of Matteawan, N. Y., wrote us in October, 1843, that, from his hornless cow—evidently a cross of the shorthorn and Suffolk, the former blood largely predominating—he received 18 quarts of milk per day, from which 15 pounds of butter per week was produced. This was while fed on grass only. Subsequently, she received an injury on her spine and was hardly able to get up, and scarcely survived calving. Yet, in three weeks, she yielded the astonishing quantity of 65½ pounds of best quality of butter, from 16 quarts of milk per day; and on one day, 15½ quarts of milk yielded 3½ pounds of butter. See further on this subject in our last number, page 258, on Mr. Jackson's grade shorthorn heifer and cows.

It must be borne in mind, that to give anything like a fair estimate of the relative merits of the Oaks and Nourse cows and the best shorthorns, that they should be presented for our consideration under circumstances as nearly similar as possible. Within the last 50 years, the demand for the shorthorns has been so large, that every choice cow was kept at breeding exclusively. Their reputation for milking qualities was deemed fully established by every intelligent man, and consequently, trials were not made, nor, if undertaken, were continued only for a short time, and the results generally, were obtained for individual satisfaction, and therefore not published.

On the other hand, the two natives were trained and pampered for their greatest efforts, with the most studied attention, and with every circumstance that would contribute to a successful issue. From the 5th of April, 1846, to the 25th of September, of the same year, the Oaks cow is said to have produced 484½ pounds butter, or a fraction over an average of 2½ pounds per day. During this time, she drank her own skimmed milk, was fed all the best grass she could eat, and so crammed with Indian meal, that she broke down under the surfeit; and her subsequent owner, Col. Jaques—the Napoleon among the champions of the *cross breeders*—by the most judicious feeding and management which his own extensive experience could dictate, was unable to resuscitate the overtaken powers of her stomach, and she at once declined below the standard of second class cows. The Nourse cow produced 14 pounds of butter in one week,

and 224 pounds in 123 days, which is a little more than 1 pound, 13 ounces per day. The quality and quantity of the feed is not stated.

The result above given, shows they were good cows—so superlatively excellent, that we have little doubt that they were themselves, to some extent, and perhaps *deeply* tinged with the shorthorn blood. It certainly has never been shown that they were not. The result proves another thing, that these were *exceptions* to the *natives*, not the rule. We hear of no others approximating to the merits of the Oaks cow, nor do we hear anything of their progeny. This is one of the grand faults of the natives—*unbred* animals, of every kind, you cannot depend on, or at all rely upon their progeny. An intelligent breeder of choice imported milkers, has just informed us of his purchase of half a dozen heifer calves at large prices, from very superior native milkers; and yet, he did not get a superior cow out of the entire lot, while his calves from his well-bred animals, invariably produced him choice milkers.

If the *general* results of *nativeism* is such as shown by these specimens, we should say breed natives, and let all others alone. But when they are adduced as the models, and as standing far in advance of all others—when they may have derived their paramount excellence from a shorthorn ancestry; and especially when we see the shorthorn crosses sought out by every intelligent person as being the best dairy stock, we say the dairy interests of the country demand that we should advocate the introduction of this breed. If we add to this, the fine forms, quiet habits, docile temper, early maturity, the rapid fattening qualities, and the extraordinary improvement immediately realised by crossing the thorough-bred shorthorns upon our native cattle, we should deem ourselves as derelict to our trust, if we omitted, on all proper occasions, to commend them to the favorable regard of the American public.

As the Massachusetts and some other agricultural papers, have so often treated their readers to the *superlative* merits of the Oaks and Nourse cows, we deem it only common justice to the shorthorns to suggest to them the propriety of copying the foregoing.

LAND is like the heart of man—some naturally better, some worse—all imperfect, and requiring much study and cultivation.

THE THREE FIRST MEN IN THE WORLD—the gardener, the husbandman, and the grazier.—*Cowley.*

Horticultural Department.

BY L. F. ALLEN.

HOW TO LAY OUT A KITCHEN GARDEN.

As many of our suburban friends, as well as practical farmers, will, in all probability, this coming autumn, lay out a permanent kitchen garden—which, by the way, is a very important affair—we propose to say a few words on the subject.

A kitchen garden yields more necessities and comforts to the family than any other piece of ground on the premises. It is, of consequence, necessary that it be so located and planned as to be ready of access, and yield the greatest possible quantity of products for the amount of labor bestowed upon it; and as locality and plan have much to do with both the labor bestowed upon it and the productions it may yield, both these subjects should be considered.

As to locality, the kitchen garden should lie in the *warmest* and *most sheltered* spot which may be convenient to the *kitchen* of the house. It should, in connection with that, be convenient of access to the dung yards of the stables. The size may be such as your necessities or your convenience may demand. The shape, either a parallelogram or a square; for it will be recollected that this is a plan allotted, not for a *show* or *pleasure* ground, but for *profit*. If the garden be large, this I hope will better allow the use of the plow to turn up the soil, which, in a large garden, is a much cheaper, and when properly done, a better mode, than to spade it; and if small, and it be worked with the spade, *right* lines are easier made with the spade than curved ones. One or more walks, at least eight feet wide, should be made, leading from a broad gate or bars, through which a cart and horse, or oxen may enter, to draw in manure, or carry out the vegetables; and if such walk or walks do not extend around the garden, which, if in a large one, they should do, a sufficient area should be thrown out at the further extremity to turn the cart upon. If the soil be free and stony, the stones should be taken out *clean*, when large; and if small, down to the size of a hen's egg, and the surface made as level as possible, for a loose soil will need no draining. If the soil be a clay or clayey loam, it should be underdrained two and a half feet deep, *to be perfect*, and the draining so planned as to lead off to a lower spot outside. This draining *warms* the soil, opens it for filtration, and makes it friable. Then, properly fenced, thoroughly manured, and

plowed deeply, and left rough—no matter how rough—in the fall of the year, and as late before the setting in of winter as you dare risk it, and that part of the preparation is accomplished.

The *permanent* or wide walks of the garden, after being laid out and graded, should never be plowed nor disturbed, except by the hoe and rake, to keep down the weeds and grass; yet, if a close, and well-shorn grass turf be kept upon them, it is perhaps the cheapest and most cleanly way of keeping the walks. They need only cutting off close with the hand hook in summer.

We have known a great many people, after laying out a kitchen garden, and preparing it for use, fill it up with fruit trees, supposing that vegetables will grow quite as well with them as without. This is a great mistake. *No tree larger than a currant or gooseberry bush should ever stand in a vegetable garden.* These fruits being partially used in the cooking department, as much in the way of vegetables as fruits, and small in size, may be permitted; and they, contrary to the usual practice, should always stand in *open* ground, where they can have all the benefits of sun and rain to ripen the fruit to perfection, as well as to receive the cultivation they need, instead of being placed under fences around the sides of the garden, where they are too frequently neglected, and become the resort of vermin, or make prolific harbors for weeds.

Along the main walks, or alleys, the borders for perennial plants, as well as the currant and gooseberry bushes, should be made, for the plow should run parallel to, and not at right angles with them. Here may stand the rhubarbs, the sea kales, the various herbs, or even the asparagus beds, if a particular quarter be not set apart for them; and even, if it be important, a portion of these main borders may be appropriated to the more common flowers and small shrubbery, if desired to cultivate them in a plain way; but not a peach, apricot, nor any other larger tree than a currant or raspberry should come within it. They not only shade the small plants, but suck up and rob them of their food and moisture, and keep off the sun, and prevent the circulation of air, than which nothing needs all these more than garden vegetables, to have them in high perfection. If it be necessary, by means of a cold exposure on one side, to have a close plantation of shrubbery to screen the garden, let it be *outside* the fence rather than within it; but if within, let there be a *broad* walk between such shrubbery and the garden

beds, as their roots will extend under the vegetables, and rob them of their food.

A walk, alley, or cartway on the sides of the garden is always better *next to the fence* than to fill that space with anything else, as it is usually shaded for a portion of the day, and may be better afforded for such *waste* purposes than the open, sunny ground within.

It will be observed that *market gardeners*, men who always strive to make the most profit from their land and labor, and obtain the *best* vegetables, cultivate them in open fields. Not a tree, nor even a bush is permitted to stand near the growing crop, if they can prevent it; and where one is not stinted in the area of his domain, their example should be followed.

A word upon *plowing* gardens. Clays or clayey loams should always be manured and plowed in the fall just before the setting in of the winter frosts. A world of pounding and hammering of lumps to make them fine in spring is saved by fall plowing, besides incorporating the manure more thoroughly with the soil, as well as freezing out and destroying the eggs of worms and insects which infest it. Thrown up deeply and roughly with the plow or spade, the frosts act mechanically upon the soil, and slack and pulverise it so thoroughly that a heavy raking in early spring is all that becomes necessary to put it in the finest condition for seeds, and make it perhaps the very best and most productive of all garden soils whatever. A light sandy loam is better to lie compact in winter, and manured and turned up in early spring. Its friable nature leaves it always open and light, and at all times in the absence of frost, accessible to the spade or the hoe. On these accounts, it is usually the most desirable and convenient soil for the kitchen garden, and on the whole, generally preferred where either kind may be a matter simply of choice.

REVIEW.

THE FRUIT GARDEN; by P. Barry, of the Mount-Hope Nurseries, Rochester, N. Y.

Mr. Barry has written a good book. We say written—because, like too many efforts of this kind, this is not a compilation of the writings of others, solely—but an *arrangement* of the entire subject of fruit culture, from the seed to the bearing tree, the growing of the fruit, picking, and packing for market, &c., &c., in a concise, perspicuous, and plain manner. At this period in the science of pomology, it is difficult for any one to write an *original* treatise on the cultivation of fruits or fruit trees. The science of veg-

etable physiology is in a degree as old as Pliny or king Solomon; and with the discoveries which have been made within the last two centuries of the properties of fruit-bearing trees, their habits, and *capabilities*, we have at the present moment a mine of exceeding wealth, into which the pomologist and vegetable physiologist only have to explore to dig up most brilliant and valuable practical treasures.

Until within the last 15 or 20 years, fruit culture, as an object of pursuit, or a subject for scientific inquiry in America, stood *nowhere*. In and about New York, Old Mr. William Prince and Mr. Bloodgood, of Flushing, were the "Court of Appeals" on all pomological questions; and Michael Floy and Mr. Hogg, who lived somewhere up the Bowery, were the chief florists of the day, while the old friend of our boyhood, Laurie Todd, of Grant-Thorburn memory, from his little walled garden and quaint old shop in Liberty street, furnished all the pots, flowers, garden seeds, and *posy* seeds, that the people of this extensive neighborhood required. The late Andrew Parmentier, who near 30 years ago emigrated from France, and established a nursery in Brooklyn, gave perhaps the first *new* impulse to extensive fruit and ornamental tree planting in this region of the state. He had an extensive and well-selected nursery where now stands a compact part of that city, and for a few years prosecuted a flourishing business. He introduced the subject of landscape gardening to the attention of our suburban citizens, and wrote and published many valuable hints on plantations in ornamental grounds. After a residence of only a few years, Mr. Parmentier died. No surviving member of his family inclining to carry on the nursery, and a demand for his extensive grounds for town lots springing up, the establishment was broken up and sold, and the grounds devoted to building purposes. Since then, new nurseries both of fruit and ornamental trees have sprung up and been enlarged, not only in the neighborhood of New York, but extended into other parts of the state, even the most remote, in great numbers; and at this time, hardly a county in the state but may boast of one or more extensive nurseries, with large assortments of fruit and ornamental trees, flowering shrubs, and plants of great variety, suited to the climate.

All these show a rapidly increasing taste and demand throughout the country. With their cultivation, has the demand also increased for books of instruction touching their propagation, cultivation, and treatment. We never shall

forget, when a boy, the absorbing interest we took in poring over "Forsyth's Treatise on Fruit Trees," an English work, quite tolerable for its day, but now out of print, and hardly ever referred to, except as an obsolete authority. Kenrick, of Boston, or its neighborhood, was the first American author who compiled a book on fruit trees, and their culture, to any extent, and with anything like a system of classification, and a thorough description of the various fruits and plants embraced in it. This, together with a volume by Manning, of Salem, and other small works by Prince, Coxe, and Floy, of New York, answered the public demand for some years.

In 1845, Mr. A. J. Downing of Newburgh, on the Hudson, then a professional nurseryman, a man of fine taste and extensive acquirements in tree knowledge, published his large work on the "Fruits and Fruit Trees of America," which had a rapid sale, and up to this period has run through several editions. Mr. Downing's work was at once acknowledged as high authority, and gave a rapid impetus to fruit culture throughout the country. But improvements have grown apace. New fruits have been introduced from abroad—not *always* to an advantage, however—still valuable for trial and experiment, and new modes of training and culture have been introduced with them, particularly from France and Belgium. Some two years ago, Mr. John J. Thomas, of Macedon, New York, an experienced nurseryman and cultivator, published "The American Fruit Culturist," principally on the plan of Downing's, but with some new matter, and more recent modes of cultivation, and descriptions of some new varieties of fruits. This also is a valuable book, and has met, as we think deservedly, with an extensive sale. "Cole's Fruit Book," also, a Boston work, on the *cheap* plan, is valuable to one who is willing to half understand his business, and remain content with what knowledge he can glean out of a half-price book.

All these works indicate that our public taste is rife with inquiry and a seeking after both fruit and tree knowledge, with an intent, too, at their cultivation in a matter-of-fact way. With all these varied authorities before us, we are now greeted with Mr. Barry's book. The method of his work is somewhat new in its treatment of the subject, and we think in that particular department, and in that alone, perhaps, more valuable than either of its predecessors. Indeed, the bulk of his volume is expended on the *principles* and *constitution* of the fruit tree;

its several parts, from root to branch, bud, leaf, and flower are analysed, dissected, and described minutely; and the various modes of propagation, pruning, planting, and training, elaborately examined, and discussed. We cannot say that Mr. Barry has made *new* discoveries. Yet he has introduced some new *foreign* information relating to certain kinds of tree culture, particularly to *dwarf* fruits, a subject now attracting much attention here, as it has for many years abroad. Soils, manures, orchards, their position, and the various minutiae attending successful fruit-growing are treated of as usual with the other books—but with distinctness, good judgment, and practical familiarity. Brief notices and descriptions of the best and most approved *standard* fruits of the various kinds are included, but not with the particularity which would give the reader that intimate knowledge of them and their habits which either the volumes of Downing or Thomas would do.

It is so common a thing for one to suppose that any one *approved* single author is all that is necessary to guide him in his operations upon any distinct subject of cultivation, that we are frequently led into error in some one or other branch of our industry, simply from not looking beyond the authority we happen to have at hand. This is a great mistake. Neither the ideas nor tastes of any two individuals of the same profession run in a like current. One indulges his best for propagation chiefly—another gives his labor to pruning. Another to diseases, their origin, and remedy. A fourth exults in his skill in planting and perfecting his trees for their ultimate harvest; while a fifth riots in the luxury of his well-ripened fruits, and gloats over his victory in the orchard. An author whose taste predominates in either of these particulars, is apt to give the views full play on his favorite subject, and but slightly discuss the others, which are of equal importance to the student, whose labors are to embrace the whole subject. It is better, unquestionably, that such variety of taste and treatment exist, to obtain the sum of knowledge which is required; and it is only by a consultation of all that one can become really informed, and accomplished in a knowledge of all.

Mr. Barry's book comes under these general remarks. To some subjects he has given less attention than a *full* and *elaborate* treatise would include. Some unsettled questions he has prudently avoided, or but slightly touched, preferring rather to play *non-committant*, than to stir

up contention where he was in doubt. Much has yet to be learned in fruit cultivation in America. Our country is young, hardly out of its swaddling clothes on many subjects, and a wide field yet remains for examination in its different soils, climates, and aspects; but all full of rich promise in the future. And as we write for those extended far and wide throughout the United States, we recommend to all who would be proficient in the cultivation of fruits, the several treatises of Downing, Thomas, and Barry, in each and all of which, they will find valuable, interesting, and indispensable matter for their government and practice as successful pomologists.

One general remark before we close. No one authority can be relied upon to govern the applicability of a *given* variety of fruit to *all* places alike. Climate, position, soil, locality have to be consulted in determining what varieties of the different kinds of fruit had best be cultivated. Experience, oftentimes a tedious and expensive schoolmaster, must be consulted. Already have the highest authorities, and the best fruits in certain sections of the country been obliged to be discarded from their want of adaptation to some one or other prominent deficiency of soil, climate, or otherwise, in the position to which they were introduced, and local fruits sprung up and became congenial to the soil and locality, themselves been substituted. It will, consequently, be a long time before a perfect manual of fruit culture can be made for all sections of the United States. But we shall hail with true pleasure every new and fresh treasure from the prolific pens of our orchardists and cultivators, who shall, from the stores of their experience and knowledge throw additional light on a subject which is destined to become and remain, a permanent and valuable branch of our national industry, as well as a most delightful object of domestic industry and enjoyment. Mr. Barry's book is published by Charles Scribner, Park Row, New York.

STRAWBERRIES.

AFTER they have finished bearing, where cultivation in distinct hills is pursued—and that is the best for garden culture, or when only a family bed or two are kept—the runners should be cut off and the soil well stirred to strengthen the roots for next year's bearing. A solution of guano water should be occasionally sprinkled over them; and if on light soils, leached ashes and clay mixed with the mould they occupy. A strong, rich clayey loam is the very best soil

for strawberries. On light sandy soils, the fruit is apt to be small, imperfect, and wanting flavor. If the plants be past three years old, either prepare a new bed of fresh earth, or let new runners strike between the old plants where the future stools should stand. When so struck, spade in the old stools, which will make a partial manure for the young plant. August is the time to plant out and establish strawberry beds when not done in the spring. If the weather be dry, throw the young plants into water just before setting them, to freshen them for striking immediately. Let the *setting* plants be *young*, from *new* runners, having vigorous *white* roots. Old plants have black roots, which are not so good, and are hard to strike. If the weather continues dry after planting, water each plant with half a pint of water, if you can. For garden culture, plant in rows two feet apart, and eighteen inches in the row. For field culture, set in rows three feet apart, at eighteen inches between the plants. They may be allowed to run together or not as your opportunity for cultivation, the size of the fruit required, and the market price of it may determine. Good, fresh, sod land, newly turned over and plowed deep, is the best, being clean, which demands less labor than old-cultivated and manured soils. When the young roots begin to feel the decomposing sod below, they rejoice and spread, and throw out such tops as will delight you, full of the finest fruit the coming spring, and repaying you for all your labor.

PREPARATION OF SOIL FOR FLOWERS.—People do not always consider that good fresh, well-mixed, pulverised soil is as necessary for the fullest development of flowers, in all their beauty and fragrance, as for the production of fruits and vegetables. Fresh soil made of sods, compost, &c., is perhaps, the best for *upland* plants. The native locality of our finest flowers is usually in a deep, cool soil, (not cold and clammy,) partially shaded by surrounding plants; and such a soil they always love. We have seen the bloom of a plant increased double in size and number by an addition of fresh soil to the roots, and a sharp heading in of the branches—roses particularly so. All flowers indeed, when branching, require the knife as well as the compost heap, to develop their beauties in perfection.

GUANO WATER.—Half a pint of Peruvian guano, dissolved in six or eight gallons of water and applied as circumstances require, has been found of service to many kinds of flowers.

Ladies' Department.

PLEASURES OF THE TABLE—STEWED PEA SHELLS.

IN describing cheap pleasures, Dickens, in his "Household Words," wisely and honestly enumerates those of the table, and descants on the cheap luxuries of the poor and middling classes of Germany, and in which he could scarcely recognise the miserable, ill-dressed, watery dishes of garden stuff that he met with at home.

Speaking of these pleasures as one of the important matters of life, when moderately indulged in, (and here Dr. Johnson agreed with him,) he observes, "that in the present constitution of our code of cookery, eating is the most expensive of our amusements. This arises mainly from our neglect of vegetables. About the middle of last summer, at Kreuznach, we partook of a certain dish at the *table d'hôte*. It was delicious; some titled English travellers were present, who seemed equally charmed. Curiosity was awakened. What could it be? The German gentleman in waiting, napkin in hand, was despatched on a special mission to the *Chef de cuisine*, to know what we had been eating; after remaining some five minutes in suspense, the receipt was revealed. It was a dish of pea shells, stewed in butter, with a sprinkling of savory herbs. Pea shells are the ordinary diet of pigs on this side of the channel; but in Germany, a little skill, a little butter, and a little herb remove them from the sty to the best dinner tables. 'The capacities of vegetables are mournfully misunderstood, Sir, in England!' said a plethoric old gentleman next to us, who had already been fed by our cookery within a beef steak of two of apoplexy. 'Look at me, Sir! You never see a foreigner in such a state as I am; but what with light wines, and this kind of thing, (swallowing a mouthful of pea shells.) I hope to get better.'

SIMPLICITY OF DRESS.

FEMALE loveliness never appears to so good advantage as when set off with simplicity of dress. No artist ever decks his angels with towering feathers and gaudy jewelry; and our dear human angels, if they would make good their title to that name, should carefully avoid ornaments which properly belong to Indian squaws and African princesses. These tinselries may serve to give effect on the stage or upon a ball-room floor, but in daily life, there is no substitute for the charm of simplicity. A vulgar

taste is not to be disguised by gold and diamonds. The absence of a true taste and real refinement of delicacy cannot be compensated for by the possession of the most princely fortune. Mind measures gold, but gold cannot measure mind. Through dress, the mind may be read, as through the delicate tissue, the letter page. A modest woman will dress modestly; a really refined and intellectual woman will bear the marks of careful selection and faultless taste.—*Exchange*.

BLACKBERRY SYRUP, made after the following recipe, is a very valuable medicine for summer complaints of children, and if used as a medicine, *only*, the brandy is not objectionable:—Take two quarts of juice of ripe berries, and boil in it one half an ounce each of nutmeg, cinnamon, and allspice, and one quarter of an ounce of cloves, all powdered; strain and add one pound of loaf sugar and one quart of the best French brandy, and bottle and seal up. Dose for a child, two or three teaspoonfuls once in three hours.

A VERY GOOD PLAIN SODA CAKE.—Take three cupfuls of flour, one cupful of sugar, one egg, one tablespoonful of butter, two teaspoonfuls of cream of tartar, one teaspoonful of soda, one teaspoonful of essence of lemon, and one cupful of sweet milk. Beat the egg, and mix it with butter and sugar, and soda dissolved in the milk. Add two cupfuls of flour; then mix the cream of tartar, dry with the other cupful of flour, and add that to the other, and roll out and bake at once in flat pans.

TO MAKE PRESERVES KEEP.—Of course, you will make them this month. The secret of preserving them from change is to exclude the air. The easiest way to do this is, to brush over a sheet of paper with the white of an egg, and cover the jar, pressing it down around the edges while moist, and it will cement perfectly tight. It is cheaper, neater, and better than sealing up the mouth of the jar with wax, or covering it with bladder.

MILDEW IN BOOKS.—Take a feather dipped in spirits of wine, (alcohol,) and slightly wash over the backs and covers. To prevent mould, put a little into writing ink. To take mildew out of linen, mix powdered starch and soft soap with half the quantity of bay salt; mix vinegar, and lay it on both sides with a painter's brush. Then let it lie in the open air till the spots are out.

Foreign Agricultural News.

By the steamer Canada, we are in receipt of our foreign journals to the 9th of August.

MARKETS.—*Ashes*, lower. *Cotton*, an advance of $\frac{1}{2}$ d. per pound. *Flour and Grain*, heavy sales. *Provisions*, generally dull.

Proportion of Carbonic Acid Endured by Healthy Plants.—The result of the late investigations of Dr. Daubeny, of England, prove that 10 per cent. of carbonic acid is not at all injurious to plants, and that it is some time before even rather larger proportions of that gas begin to produce bad effects. Even as much as 20 per cent. produced no injury in ten days.—*Gardeners' Chronicle*.

Cost of the Conveyance of Sewerage Water.—It is calculated by experienced engineers, that sewerage water may be raised by the steam engine 150 feet, and forced through iron pipes in the way the supplies of water are brought to most large towns, and thus conveyed and sold with a profit at $2\frac{1}{2}$ d. the ton, after being conducted in this manner 14 miles.—*Agricultural Gazette*.

Bone Manure Consumed in England.—England consumes more bones, for agricultural purposes, than all the rest of the world. As bones gathered for this purpose in Great Britain are free from police or excise inspection, we have no means of ascertaining the amount of the home supply; but the official value of those imported amounted, some 12 years ago, to \$1,500,000 per annum, and the selling price to our farmers would probably be little under \$2,000,000. Since then, the foreign supply has been decreasing; the bones imported in 1848 being worth, in bone dust at 31 cents per bushel, about \$1,100,000.—*Scottish Journal of Agriculture*.

Increase of the Use of Guano in England.—The imports of guano rose from 2,000 tons in 1841, to 220,000 tons in 1845; but since then, the paucity of the supply has caused the average annual importation to fall to about 90,000 tons. It will give some idea of the energy and enterprise of our farmers to state that as the price of guano has ranged from \$30 to \$50 per ton, the money expended on the purchase of this manure alone amounted, in 1845, to the enormous sum of a million and a half sterling.—*Ibid*.

Dépôts of Lime and Gypsum for Farmers.—The Belgian government, having established dépôts in different places throughout Luxemburg and Namur, for supplying lime to the farmers of those districts, in which it had been very difficult for them to obtain that earth, for the improvement of their land, have, by a further measure, ordered the establishment of dépôts of gypsum in different parts of Flanders for the same purpose, a substance which, although most cheap and abundant in France, is not found naturally in Belgium, in any working quantities.—*Ibid*.

Re-appearance of the Potato Disease in Ireland.—Reports concerning the re-appearance of the potato

disease have again become rife. Irish newspapers, in particular, speak of unmistakeable evidence having been obtained of the renewal of the plague spot; and our own correspondents have, here and there, announced the same fact. That we should see such symptoms for some years to come is the least that can be expected; for a disease like that in question is not likely to disappear as rapidly as it came on. But we are happy to be able to allay such apprehensions as exist, by stating that after diligent inquiry we can hear of nothing which ought to excite alarm; and that we believe the crop to be just as safe as it was last year.—*Ag. Gazette*.

Grape Mildew in France.—M. Bergman, junior, gardener to Baron James de Rothschild communicates the following to the editor of the London Gardeners' Chronicle:—"I beg to send you a specimen of the kind of mildew which has infested vines both in houses and in the open air, in the vicinity of Paris during these three years past, and principally in the gardens of Versailles, Suresne, and Ferrières. In these places, all possible means have been employed to avert the malady, but without success. Sulphur, tobacco smoke, tar water, and lime water, have been used, but the parasite makes new progress every day, and the grapes are rendered uneatable. I hope you will be able to furnish us with some new expedient for combating the epidemic. [You had better provide yourself with one of the modern sulphurators. Sulphur applied early enough, and persevered in, is a certain cure in this country. But you must persevere, and you must attack the enemy when he first appears."—Eds.]

The Supply of Peruvian Guano.—The agency in London have just published an account rendered by Messrs. Antony Gibbs and sons, to Messrs. Rivero and Murrieta, the commissioners for the Anglo-Peruvian debt, of the quantity of guano sold in this country. It appears from this that the total imports have been 130,580 tons, of which the sales already accounted for have been 50,233 tons, the sales subsequently effected and to be accounted for hereafter have been 37,661 tons, and the stock on hand unsold on the 30th June, amounted to 42,686 tons. In the 50,233 tons sold the proceeds have been £212,546 7s. 3d. giving an average of £4 4s. 7½d., the price to be received for the 37,661 tons of which the sales have been subsequently effected. The result of these returns is, that £107,200, being half the net proceeds, after deducting the amounts paid for former dividends, has been applied to the reduction of the Peruvian debt. The report of the agents states that "the quantity of guano which will have arrived within the ensuing 12 months will not be less than 150,000 tons; that the demand for the guano is not only increased in this country, but also in all other parts of the world; that the guano on the Chincha Islands is inexhaustible, and from the peculiar nature of these rainless islands it is not likely that any other guano will be discovered elsewhere retaining the ammonia, which constitutes the pre-eminent value of Peruvian guano."—*Agricultural Gazette*.

Editors' Table.

TIMES OF HOLDING ANNUAL SHOWS AND FAIRS.—The following indicate the times and places the annual shows and fairs of several State and County Agricultural Societies are to be held in various parts of the United States:—

Fair of the American Institute of New York—October 1st, the fair at Castle Garden will be open to visitors at 8, A. M.

October 6th. Special exhibition of dahlias and roses at Castle Garden.

October 7th. Testing of plows at White Plains. Committee will be on the ground at 10, A. M.

October 8th. Plowing and Spading Match at White Plains. Committee will be on the ground at 10, A. M.

October 15th, 16th, and 17th. Cattle Show at Madison Cottage, corner of Fifth avenue and Twenty-third street. Entries may be made on the 13th, 14th, and 15th, on the ground, or at any time previous, by addressing A. Chandler, Corresponding Secretary, 351 Broadway.

October 16th. Anniversary address, in the evening, by Dr. Charles T. Jackson, of Boston, Massachusetts. Tickets gratis. To be had at the Garden, or from any of the managers. Due notice of the hour and place will be published.

New-York State Agricultural Society, at Rochester, September 17th, 18th, and 19th.

Rhode-Island Society for the Encouragement of Domestic Industry, and the Rhode-Island Horticultural Society, at Providence, September 10th, 11th, and 12th.

Vermont State Agricultural Society, at Middlebury, September 10th and 11th.

Ohio State Agricultural Society, at Columbus, September 24th, 25th, and 26th.

Pennsylvania State Agricultural Society, at Harrisburgh, October 22d, 23d, and 24th.

Georgia State Agricultural Society, at Macon, October 29th, 30th, and 31st.

Maryland State Agricultural Society, at Baltimore, September 23d, 24th, 25th, and 26th.

Oneida-County (N. Y.) Agricultural Society, at Utica, September 9th 10th, 11th, and 12th.

Saratoga-County (N. Y.) Agricultural Society, at Mechanicsville, September 9th, 10th, and 11th.

Chenango-County (N. Y.) Agricultural Society, at Norwich, October 1st and 2d.

Westchester-County (N. Y.) Agricultural Society, at White Plains, October 7th, in connection with the Plowing Match of the American Institute.

Burlington-County (N. J.) Agricultural Society, at Mount Holly, October 8th.

Essex-County (N. J.) Agricultural Society, at Elizabethtown, September 17th and 18th.

Philadelphia-County (Pa.) Agricultural Society, at Philadelphia, October 8th and 9th.

Worcester-County (Mass.) Agricultural Society, at Worcester, September 18th. Exhibition of the Wor-

cester Horticultural Society and the Mechanics' Association, on the same day.

Clermont-County (Ohio) Agricultural Society, October 2d, 3d, and 4th.

Lexington (Ky.) Fair, at Lexington, September, 9th and 10th.

Bourbon-County (Ky.) Fair, September 24th and 25th.

Fairfield-County (Conn.) Agricultural Society, at Bridgeport, October 8th, 9th, and 10th.

In addition to the usual premiums for plowing, P. T. Barnum, Esq., President of the society, with great liberality, offers additional premiums, amounting to \$200, the highest of which is \$50, open to plows and teams from every state in the Union. This will be a capital opportunity for the plow makers of the United States to show their hands.

THE COTTAGE BEE KEEPER; or Directions for the Practical Management of Bees; by a Country Curate. Published by C. M. Saxton, agricultural book publisher, 152 Fulton street, New York. This little work only need be seen to be appreciated by every cottage or country resident; for it gives him such plain and practical directions how to manage this most profitable and pleasant adjunct to a rural residence, that he need never be without that most delicious luxury upon his table—a clean, pure, glass cup of honey. The work is done up in the same neat style of all the late publications, denominated "Saxton's Cottage and Farm Library."

A BOOK FOR EVERY BOY IN THE COUNTRY; ELEMENTS OF AGRICULTURE, translated from the French by F. G. Skinner; published by C. M. Saxton, American agricultural book publisher, 152 Fulton street. Price 25 cents. All that is necessary to say to recommend this work, is to assure our readers it is exactly what the title imports, and should be placed in the hands of every American boy, whether designed for an agriculturist or not; for it will give him an easy insight into the elements of agriculture.

THE JOURNAL OF AGRICULTURE; William S. King, editor, J. J. Mapes and Allen W. Dodge, associate editors. Published on the first and third Wednesday of every month, 32 pages, double columns, octavo. Price \$2 a year. Office at Horticultural Hall, 38 School street, Boston, Massachusetts, where exchange papers should be sent. Correspondents should direct to William S. King, P. M., Manton, R. I. In the above work, the editors aim to establish an agricultural periodical of a higher order and more scientific character, than any heretofore published in the United States; and the better to insure this great desideratum, in addition to their own pens, they have secured those of Dr. C. T. Jackson and other eminent men. A work of this character is much wanted in our country, and if conducted with fearless ability, may do great good to the farming interest. We have received two numbers of this periodical, and find them lively and spirited, and replete with good matter. We particularly like the tone of the first of a series of articles on Agricultural Education. We shall take pleasure in forwarding subscriptions for the above work.

NEW-YORK CATTLE MARKET.

At Market.—2,300 Beeves, (southern and western,) 113 Cows and Calves, and 8,500 Sheep and Lambs.

Beef Cattle.—Prices do not vary materially from our last. Good qualities sold from \$5.50 to \$7.50 per hundred pounds.

Cows and Calves.—All sold at from \$22 to \$42.

Sheep and Lambs.—Sales of Sheep at from \$1.37 to \$4.50. Lambs at from \$1.25 to \$4. 800 unsold.

To CORRESPONDENTS.—Communications have been received from Watson G. Haynes, T. B. Miner, Subscribers and Readers, Joseph U. Thomas, S. W. Jewett, J. Donovan, A. L. Elwyn, Henry L. Smith, Sidney Weller, Wm. H. Hart, and S. Clark, Jr.

ACKNOWLEDGEMENTS.—Samples of soil for analysis from Henry L. Smith, and Dr. E. F. Peck.

SUPERIOR SEED WHEAT.—A large assortment of the best varieties of improved seed wheat, among which are the Golden Australian, China or Troye, White-Flint, Hutchinson's Improved, Soule and Meditæraenean.

Turnip Seed.—The Early Flat Dutch or Spring, Early Red-top Flat Strap-leaved Red-top Flat, Strap-leaved, White Flat, Early Garden Stone, Large English Norfolk, Pomeranian, White Globe, Large Flat, Long White or Cow Horn, Long Tankard or Hanover, Yellow Stone or Orange, Yellow Aberdeen or Bullock, Long Yellow French, Dale's Hybrid.

Seed Rye of the best winter variety; also, a cheaper kind, suitable for late fall and early spring pastures.

au A. B. ALLEN & CO., 189 and 191 Water st., N. Y.

SHORTHORN BULL CALVES.—For sale, two very superior thorough-bred shorthorn bull calves, got by the superb imported bull Exeter, out of two of Mr. J. F. Sheafe's great milking cows. Exeter is of the Princess tribe of shorthorns, and was bred by Mr. Stephenson, of Durham, England, and imported by Mr. Sheafe. The dams of these bull calves are celebrated milkers. For a particular account of Exeter and these cows, see the last volume of the *Agriculturist*, and page 151 of the present volume. Mr. Jackson, of Astoria, has a young bull, dropped last August, got by Exeter, out of one of Mr. Sheafe's cows, whose superior we do not believe was ever produced in the United States; and these calves now advertised for sale, we think equally promising.

au A. B. ALLEN & Co., 189 and 191 Water st., N. Y.

VALUABLE FARM FOR SALE in the town of Conchin, Broome county, state of New York, containing 300 acres, with a large brick house, barn, hay houses, carriage houses, wood house, and all other necessary buildings, elegantly situated, fronting the New-York and Erie Railroad and Collecton Turnpike, and Susqueannah River, three miles from the Great Bend Depot, two miles from Kirkwood Depot, and 58 miles from Binghamton, well proportioned for wood, meadow and grain land. An orchard with grafted fruit, well watered, and is one of the best farms in the town of Conchin. For further particulars apply to

JOSEPH CONCHIN, near the premises, or
EDWARD WAIT, Montgomery Co., N. Y., or
au MILTON McEWEN, Warwick, Orange Co., N. Y.

AN IMPROVED FARM FOR SALE.—This farm of 69 acres lies in Rochester, Ulster Co., New York, a drive of two hours connects it with the Hudson River, at Roundout. The Delaware and Hudson Canal passes through the premises, thus affording a better market for farm produce at the door than can be obtained in the city of New York. The house and outbuildings have been thoroughly repaired during the past year, which, together with the farm, are now in excellent condition. The premises are well watered, and contains thereon an excellent apple orchard of 100 trees, of 10 years' growth. Extensive beds of limestone abound in the immediate vicinity, from which good lime is manufactured, and sold at from three to five cents per bushel, thus affording facilities unequalled for improving the soil. Extensive flour and plaster mills are located at the High Falls, three miles distant from the premises. In connection with the above, a wood lot of 100 acres will be sold at a reduced price. Price of improved farm, \$4,800. Terms.—One third of the purchase money upon the execution of the deed—the balance can remain on bond or mortgage for five years.

au ASA SNYDER, Rochester, Ulster Co., N. Y.

DRAIN TILES.—The Staten-Island Drainage Tile Company are now prepared to supply agriculturists with the above-named tiles of the most approved patterns.

2-inch round pipes, one foot in length, per thousand,	\$ 9
2½ Do.	Do. 10
3 Do.	Do. 12

and pipe and horse-shoe tiles of all sizes, at corresponding prices. The establishment is at Latourette's Point, Fresh Hills, near Richmond, Staten Island, and boats drawing four feet of water can enter the yard, and load from the kilns. Address

juft A. B. ALLEN & Co. 189 and 191 Water st. N. Y.

A. G. BAGLEY & Co., manufacturers of gold pens, gold and silver pen and pencil cases, ivory and tortoise-shell holders, and patentees of the celebrated extension cases, No. 189 Broadway, New York. ju tf

PRINCE'S LINNEAN BOTANIC GARDEN and Nurseries.—Wm. R. Prince & Co., Flushing, Long Island, offer their select and unrivalled collection of fruit and ornamental trees, shrubbery, roots, bulbous and other flowering plants, peonies, and greenhouse plants. The stock of standard and dwarf pears, and of all other fruit trees, is very extensive. 100,000 evergreen trees comprising every variety. 35,000 roses of the finest perpetual, daily and moss varieties. 100 splendid varieties of peonies, all the new and superior strawberries, 10,000 grape vines of the finest kinds. Descriptive catalogues with reduced prices will be sent to post-paid applicants. s2t

PREMIUM STRAWBERRIES, Wm. R. Prince & Co., Linnean Garden and Nurseries, Flushing.—The present is the proper period for planting beds for next summer's crop. The collection is unrivalled, and comprises the following:—Profuse Scarlet, Charlotte, Primate, Primordial, Crimson Cone, Crimson Pine, Hovey's Seedling, Burr's new Pine and his other varieties, Large, Early Scarlet, Richardson's Early, Late, and Cambridge; Iowa, Black Prince, Taylor's Seedling, Lizzie Randolph, Eustasia, Boston Pine, Huntsman's Pistillate, Eberlein, Brilliant, Cornucopia, Refugent, Unique Scarlet, Serena, Dundee, Willey, Genesee, Bishop's Seedling, Monstrous and Prolific Swainstone, Unique Prairie, the Alpine varieties, and many others, at reduced rates.

N. B. Descriptive catalogues with prices of trees, plants, roses, strawberries, bulbs, &c., will be sent to post-paid applicants.

slt WM. R. PRINCE & Co.

EAGLE PLOW.—No. 28.—The following extract from the letter of a gentleman who purchased one of these plows, fully explains its character. "In answer to your inquiry how I like the great breaking plow, I have to say it entirely exceeds my expectations, and even your own recommendation, which I then thought quite extravagant. I put on four stout yoke of oxen, and drove into the thickest patch of scrub oak roots upon my farm; not without some misgivings, that I should break the plow instead of the roots; but I have now turned over twenty acres as completely as though it had been nothing but stubble, and the plow is this day better than it was when it came from your store. I think it the cheapest and best plow for such heavy work ever invented."

These plows are for sale at our Agricultural Warehouse, No's. 189 and 191 Water st., New York. Price, plain, \$18—full rigged, with wheel, draft rod, and cutter, \$30.

A. B. ALLEN & Co.

GREENHOUSE PLANTS, VINES, AND Roses. Parsons & Co. offer for sale every desirable variety of Greenhouse Plants, and many valuable novelties recently introduced from Europe. Attention is particularly directed to their fine stock of Camellia wilderi, the perfection of whose form is not attained by any other variety. The original stock, both of this and C. Abbey Wilder, is in their possession.

Growers of Grapes are invited to examine their Vineries, now in full fruit, and from which they can furnish good vines of about forty varieties, at

50 cents for those one year old.
75 " " " two years old.
\$1.00 " " " of extra size.

Their stock of saleable roses includes some thousands on their own roots of the Remoutant, Bourbon, China and Garden Roses, in their various sub-classes. Catalogues furnished gratis on application to Flushing, near N. Y.

PARSONS & Co.

NEW-OXFORDSHIRE BUCKS FOR SALE.

The subscriber has a number of yearlings and two-year-old bucks which he will sell any time when called for, and has no hesitation in saying this breed of sheep is superior to all others for large carcasses, heavy fleeces, early maturity, and constitution, and defies competition with all other breeds for profit. This flock, (which has been bred from some of the best ever imported,) is so well known they need no further description than to say that the sire clipped 18 pounds of washed wool, and weighed 361 pounds alive. Gentlemen are invited to call and see for themselves, or communicate by mail. Direct to

ju 5t CLAYTON B. REYBOLD, Delaware City, Del.

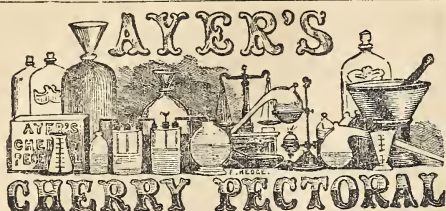
ENDLESS-CHAIN PUMPS, OR WATER Elevators.—These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.

A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults or privies, where the contents are in a semi-liquid state.

A. B. ALLEN & Co., 180 and 191 Water st., N. Y.

LIGHTNING RODS, constructed on scientific principles, and if properly put up, will render churches and other buildings secure from the electric shock.

my A. B. ALLEN & Co., 189 and 191 Water st.



AYER'S
CHERRY PECTORAL
 For the Cure of
COUGHS, COLDS, HOARSENESS, BRON-
CHITIS, CROUP, ASTHMA, WHOOP-
ING COUGH AND CONSUMPTION.

This remedy is offered to the community with the confidence we feel in an article which seldom fails to realise the happiest effects that can be desired. So wide is the field of its usefulness and so numerous the cases of its cures, that almost every section of the country abounds in persons, publicly known, who have been restored from alarming and even desperate diseases of the lungs by its use. No family should be without it, and those who have used it, never will.

Read the opinion of the following gentlemen, who will be recognised in the various sections of country where they are located—each and all as merchants of the first class and of the highest character—as the oldest and most extensive wholesale dealers in medicine with an experience unlimited on the subject of which they speak. If there is any value in the judgment of experience, see

THIS CERTIFICATE.

We, the undersigned, wholesale druggists, having been long acquainted with Ayer's Cherry Pectoral, hereby certify our belief that it is the best and most effectual remedy for pulmonary complaints ever offered to the American people. And we would, from our knowledge of its composition, and extensive usefulness, cordially commend it to the afflicted as worthy their best confidence, and with the firm conviction that it will do for their relief all that medicine can do.

Henshaw, Edmunds & Co., Boston, Mass.; Reese & Coulson, Baltimore, Maryland; Ladd & Ingraham, Bangor, Maine; Haviland, Harrell & Co., Charleston, S. C.; Jacob S. Farrand, Detroit, Mich.; T. H. McAllister, Louisville, Ky.; Francis & Walton, St. Louis, Mo.; Joseph Tucker, Mobile, Ala.; Theodore A. Peck, Burlington, Vt.; Haviland, Risley & Co., Augusta, Ga.; Isaac D. James, Trenton, N. J.; J. M. Townsend, Pittsburg, Penn.; Clark & Co., Chicago, Ill.; E. E. Gay, Burlington, Iowa; M. A. Santos & Son, Norfolk, Va.; Edward Bringhurst, Wilmington, Del.; John Gilbert & Co., Philadelphia, Pa.; Z. D. & W. H. Gilman, Washington, D. C.; J. Wright & Co., New Orleans, La.; Chas. Dyer, Jr., Providence, R. I.; Jos. M. Turner, Savannah, Ga.; Wade, Eckstein & Co., Cincinnati, Ohio.

IN FOREIGN COUNTRIES.

J. G. Coffin & Co., Valparaiso, Chili; F. M. Dimond & Co., Vera Cruz, Mexico; Fred. Rivas & Co., Bogota, New Granada; S. Provost & Co., Lima, Peru; Morton & Co., Halifax, Nova Scotia.

With such assurance, from such men, no stronger proof can be adduced, except that found in its effects upon trial.

Prepared and sold by JAMES C. AYER, Practical Chemist, Lowell, Mass., and by druggists generally. sept 3t

IMPORTED DEVON BULL FOR SALE.

We intend offering for sale at the auction held on the closing day of the New-York State Agricultural Society's Show, at Rochester, in September next, if not previously disposed of, our thorough-bred imported Devon bull Megunitecock, which took the first prize at the show of the American Institute last autumn.

Megunitecock was five years old in April last; was bred by Mr. Baker, of Devonshire, England. He was got by Prince Albert out of a cow sired by Silfiant, and was purchased by Mr. George Turner, of Barton, near Exeter, England, in the spring of 1843, who used him one season, and sent him to us in the autumn of that year. Prince Albert took the first prize at the Royal Agricultural Society's Show, held at Southampton, and was sold to the French government for 120 guineas. Silfiant was one of Mr. James Quartly's favorite bulls, and was sold for 100 guineas.

W. P. & C. S. WAINWRIGHT,
 Rhinebeck, Dutchess Co., N. Y.

NEW BREED OF DUCKS.—The subscriber has for sale a few pair of a cross between the black Botany-Bay and the white Aylesbury breeds. They are jet black with white or mottled necks and breasts, and seem to partake of the disposition of the Aylesbury to live on grass, and to thrive without water. Price, \$5 per pair, delivered boxed, on board of any vessel or conveyance in New York.

sept 3t

S. B. PARSONS, Flushing, near N. Y.

THE NEW-ENGLAND

Live-Stock Insurance Company,

New Haven Conn.,

CAPITAL \$50,000,

With power to increase to \$100,000.

Insures horses, cattle, &c., against loss from death, either from natural causes, or accident, or from disease of any description.

THOMAS KENDRICK, President.

T. REYNOLDS, Secretary.

New-York agency, corner of Wall and Hanover streets, Merchants' Exchange. ju 1y

SHORTHORN BULLS FOR SALE.—The subscriber offers for sale the following shorthorn bulls. They are of the Princess tribe bulls; and their equals cannot be shown in America:—

EARL OF SEAHAM, (10,181),

Deep Roan; calved April 21st, 1843; bred by John Stephenson, Esq., Wolviston, county of Durham, England; imported 1850, by A. Stevens and J. M. Sherwood; got by Earl of Antrim (10,174); dam, Primrose, by Napier (6,238); grandam, Rose Ann, by Bellerophon (3,119); great grandam, Rosette, by Belvedere (1,706); gr. gr. grandam, Red Rose, by Waterloo (2,816); gr. gr. grandam, Moss Rose, by Baron (58); gr. gr. gr. grandam, Angelina, (bred by Sir Henry Vane Tempest), by Phenomenon (491); gr. gr. gr. gr. Anna Boylene, by Favorite (252); gr. gr. gr. gr. grandam, Princess, (bred by Robert Colling), by Favorite (252); gr. gr. gr. gr. gr. grandam, Brighteyes, by Favorite (252); gr. gr. gr. gr. gr. gr. grandam, Brighteyes, (bred by Alexander Hall), by Hubback (319); gr. gr. gr. gr. gr. gr. gr. grandam, Brighteyes, by Snowdon's Bull (612); gr. gr. gr. gr. gr. gr. gr. gr. grandam, Beauty, (bred by Thomas Hall), by Masterman's Bull (422); gr. gr. gr. gr. gr. gr. gr. gr. grandam, Duchess of Atholl, by Harrison's Bull (292); gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, Tripes, (bred by C. Pickering), by Studley Bull (626); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam, bred by Mr. Stephen son, of Ketton, in 1739. See 9th vol. Herd Book, pages 65 and 526). Earl of Seaham won the first prize for two-year-old short horn bulls at the New-York State Agricultural Show, 1850; and first prize for aged bulls, or those two years and above, of the American Institute of New York, in October, 1850.

A BULL CALF,

Red, with a very little white; calved January 23d, 1851; got by imported 3d Duke of Cambridge (5,941); dam imported Princess III., (bred by Mr. Stephenson), by Napier (6,238); grandam, Rose Ann, by Bellerophon (3,119), as in Seaham's pedigree; Rosette, by Belvedere (1,706); Red Rose, by Waterloo (2,816); Moss Rose, by Baron (58); Angelina, by Phenomenon (491); Anna Boylene, by Favorite (252); Princess, by Favorite (252); Brighteyes, by Favorite (252); Brighteyes, by Hubback (319); Bright eyes, by Snowdon's Bull (612); Beauty, by Masterman's Bull (422); Duchess of Atholl, by Harrison's Bull (292); Tripes, by the Studley Bull, (626), out of a Cow bred by Mr. Stephenson, of Ketton, in 1739. (See Herd Book, vol. 9th, page 550, under head Rose Ann).

They are now on Col. Sherwood's farm at Auburn. He invites breeders and purchasers to see them. He can assure those who have not seen Seaham, that the portrait of him in this number of this paper, at least, is no better in any respect than he is, either in substance or style.

The above bull calf is an extraordinary one, of fine style; rich red color, with little white.

These two Bulls are of the superior Princess tribe of shorthorns, the best for milk, quality, and style, in England or America.

Purchasers desiring superior animals, can meet their wishes here; and, if they wish the Princess tribe blood, can get it nowhere except of the subscriber and Mr. Stevens, who alone, in the United States, have anything of that tribe, and they have none but those for sale. A. B. Allen, 189 Water street, New York, will give information as to prices.

J. M. SHERWOOD.

au 2t Auburn, Cayuga Co., New York.

FRUIT AND ORNAMENTAL TREES FOR SALE.—50,000 Peach trees of one and two years growth, from the bud; 40,000 Apples; 5,000 Cherries; 5,000 Dwarf Pears, each containing all the most esteemed varieties, and of large size. Also Quinces, Plums, Nectarines, Apricots, Almonds, Grapes, Raspberries, Gooseberries, Currants, Strawberries, &c., &c. 50,000 Silver and Ash-leaved Maple Seedlings of one year's growth; 50,000 Apple Seedlings. The above will be sold on the most reasonable terms. Persons residing at the south and west should send their orders early, so that the trees may be forwarded by the last of October or first of November. Catalogues with prices annexed will be sent to all applicants.

au 3t

ISAAC PULLEN,
 Hightstown, Mercer Co., New Jersey.

HIGHLY IMPROVED ESTATES AND VALUABLE TIMBERED LAND ON LOWER JAMES RIVER FOR SALE.—The undersigned, prevented by engagements, requiring his undivided attention elsewhere, from residing on his estate, will sell, on the premises, publicly, at 11 o'clock, A. M., on Tuesday, the 23d day of September next, without regard to weather, that large and valuable body of highly-improved arable and heavily-timbered land, extending up the north side of James River, from the Chickahominy, a distance of more than five miles, in the county of Charles City, Virginia, well known under the general designation of "Sandy Point."

This estate lies 33 miles below Petersburg, 45 miles below Richmond, and about 65 miles above Norfolk, in what is justly considered the finest and most extensive grain-growing region of Virginia, and as healthy as any on our rivers. Spring and well water abundant and excellent. The number of acres is upwards of 4,000, of unsurpassed natural quality, of which more than 2,000 acres have been three times, and are now in a high and successful state of cultivation, upon the five-field rotation; and more than 1,000 acres well set in clover. The balance, chiefly in wood and timber, embracing some of the best timbered land in Eastern Virginia, convenient to good navigation. Marl abounds on the river, and stone lime is supplied at 6½ cents per bushel.

The division will be nearly as follows, of which surveys and maps will be exhibited:—

[No. 1.] "UPPER QUARTER," 841 acres, 560 improved, 281 principally in wood and timber. Buildings—a small frame dwelling, kitchen and laundry, smoke house, negro houses, &c. Barn with sheds and stationary horse power and shelters.

[No. 2.] "UPPER TEDDINGTON," The family residence, 797 acres, 540 improved, 257 principally in wood and timber. Buildings—a commodious wooden dwelling, large two-storied kitchen and laundry, ice house, new and commodious stable and carriage house, storehouse, shops, servants' houses, and every other convenient outhouse usually on such farms. Also, a new barn, part wood and part brick, with four floors, 80 by 38 feet, and a wing 30 by 50, for bone, plaster saw and grist mill. In the barn are two new 36-inch drums, revolving rakes, fans, sieves, and every other appurtenance for threshing and winnowing wheat, shelling and fanning corn, grinding, and sawing; all efficiently driven by a 16-horse power stationary engine, in complete order and condition. The orchards are large and stocked with fruit of every variety, of the finest quality.

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[No. 4.] "NECK," 707 acres, 537 improved, 171 principally in wood and timber, exclusive of more than 120 acres of meadow or marl land, well located, and reclaimable at small expense.

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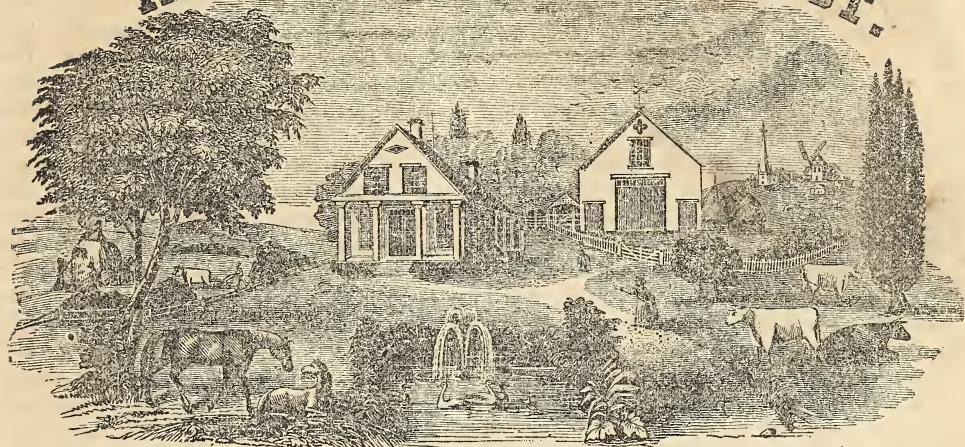
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THE EDITOR'S OFFICE is at the New York Agricultural Warehouse of A. B. Allen & Co., 189 and 191 Water street, up stairs, where he will always be happy to see his friends from country or city. Office hours, 12 to 3 o'clock, P. M.

A. B. ALLEN and R. L. ALLEN, late Editors of the *American Agriculturist*, will be regular contributors to the *Plow*. Also, Professor Norton, Dr. Anisels, L. F. Allen, and others, late correspondents of the *Agriculturist*.

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A FARMER'S KITCHEN OF OLD TIMES IN NEW ENGLAND.

A PICTURE of one of these scenes of comfort has lately fallen under my observation. What can be more cheerful and pleasant than the view of a farmer's kitchen, taken during the evening meal of a cool autumn day. It is a picture of the calm happiness of rural life.

The kitchen of the old farm house of New England is not the scullery, or mere cooking place of some modern houses—a dirty hole or comfortless out room, or sort of human bake oven where the cook is almost as much cooked as the food. No, it is a room perhaps 24 feet long and 16 wide, well lighted, warm, neat, and every way comfortable. Upon one side, there is a fireplace large enough to roast a whole ox, in which a great fire of logs sends up a cheerful blaze, lighting up the whole room so its brightness might be seen through the great uncurtained windows like a beacon light to the traveller as he comes down the slope of yonder hill two miles away, and makes him involuntarily thank God in anticipation, for the good things spread out upon the great table standing between the window and the fire.

Let us take note of this old-fashioned meal. At the head of the table sits a matron of some 60 summers—though in appearance there is nothing of the winter of old age about her—her dress is a gown of homespun worsted, well fortified with flannels from the same manufactory, that bid defiance to the autumn winds of a rigorous climate. She wears a cap on the head, and shoes, and stockings upon the feet that were made in pursuance of the best medical recipe ever written—"Keep the head cool and the feet dry and warm"—for the stockings are the product of busy fingers at idle moments with many housewives, and the shoes of stout leather, were made for service, and the cap is a mere ornament—a snow wreath among raven locks—and her face is the indication of health and happiness. Upon her right hand, sits the farmer, dressed in a butternut-colored coat, blue pants, buff vest, white linen shirt—every article homemade—stout boots and black silk cravat—for he has been to town, and this is his holiday suit. Below him sits Jedediah, Marvin, Abram, and Solomon, all *economical names*, for they can be shortened in common use to Jed, Marv, Ab, and Sol. Two of these wear the check-woollen winter frock of New-England farmers—the others are in round jackets—they are school boys. Upon the left, sits Mary, Adeline, and Mehetael, pictures of rural beauty and health. The

eldest is "drest up;" she has been to town with father; she has a gown of "boughten stuff," around her neck is a boa of colored lamb's wool, knit by her own hands, fastened in the throat with grandmother's silver broach. The other two are in check woollen, spun, wove, colored, and made up under the same roof. Further down the table are three athletic young men, day laborers upon the farm—sons of neighboring farmers—one of whom is eyeing the charms of the sweet face of Mary with an expression easily read by a good physiognomist. The group is completed by the schoolmaster, a young man with a glowing eye which speaks of an intellect that will tell upon the world some day with as much force as though he had not been obliged to obtain his education by summer labor and winter teaching. He is one of New England's rising sons. The meal is for men who toil. At one end of the table, stands a pot of ample dimensions smoking from the great oven; flanking the fireplace, of that most excellent of New-England cookeries,

"A dish of baked beans,"

crowned with a great square piece of salt fat pork, crisped and rich. Lower down, a broad pewter platter holds the remains of the "boiled victuals" that formed the dinner—beef, pork, potatoes, cabbage, beets, and turnips—a pile that might rival a small hay cock in size and shape—a plate of rye and Indian bread, cold, and another made of rye flour are untouched; for a great loaf just drawn from the oven, nicely browned and hot, is offered in great broken pieces to tempt the appetite to one of the richest repasts ever given to an epicure. By the side of the old lady, stands a black earthen tea pot, the contents of which are freely offered, but only accepted by two of them, as the rich new milk or hearty old cider is preferred as a beverage, morning, noon, and night, by those old-fashioned hearty laborers. We must not forget the never-failing accompaniment of the evening meal at this season of the year in New England, for 'tis New England's proudest dish, the golden pumpkin sweetest pie.

God being thanked for his great bounties after the close of this happy meal, all draw into a circle around the great fireplace. Father is finishing off an axe helve, Jed is mending a pair of boots, and one of the hired men upon the other side of the same bench is repairing a wagon harness—both use the same tools. The other two are employed, one shelling corn and the other helping Mary peel pumpkins, which are

cut in slices and hung upon poles overhead. This is Mary's accepted lover. Happy hearts and blessed industry. Marv, Ab, and Sol are engaged with the school master around the big table, lighted by a home-made candle; they are studying geography, writing, and arithmetic—fitting themselves for future statesmen. Mother is making a new coat for one of the boys, Ada is ironing at a side table, and Hitty is washing the supper dishes at another. There are two other members of this happy family group—the cat occupies the top of the blue-dye tub, which stands in one corner of the fireplace, and Old Bose sleeps quietly under the table. Directly, and before any sound is audible to human ear, he gets up, walks out into the long entry and gives a loud sharp bark at the outside door and stands waiting the approaching step. Soon satisfied that the new comer is a friend, he retires again to his repose, and three or four boys that look as though they might be brothers to those already described, so much are they dressed alike, enter and draw around the table with the others and the schoolmaster. These are from a neighboring farm, sons of a widow, who have till now been so much engaged with the labors of the farm, they have been unable to attend the school in the day time, but are determined to loose none of the evening opportunities to keep along with their class. These will make honest, intelligent, industrious farmers. The old folks welcome them heartily, and the young ones are all rejoiced at their arrival. The old lady inquires why in the world their mother did not come along; and Mary, the kind-hearted Mary, is so sorry to hear that it is because Sarah is not so well, and mother is very busy getting their new clothes done so they can go to school, as soon as they finish picking apples. "John," says she, "let us hurry and get through our 'stent' and we will go over to the widow's and while I help her with her sewing, you shall read for the amusement of poor Sarah, for an hour or two." "If that is the case" says father, laying down his axe handle, "my good children, you shall go now. I will finish your work." "And Mary, my dear girl, don't go empty handed," says mother, "you know from experience how sweet little delicacies brought by friendly hands to the side of a sick bed, are to the poor invalid." "Hitty, my dear, if you have done your dishes, you must get your cards and make a few rolls, for I am quite out of grey yarn, and we must have some more stockings in the work." "Old man, don't cut that pumpkin too thick." "Ada, daughter, get a plate of doughnuts and

some of those nice fall pippins and set on the table, I guess these boys can eat a few while they are cyphering. I do wonder if you have got light enough." "Sol, get another candle, I am sure such industrious boys ought to have all the light they want."

Thus, my readers, I have given you a slight outline of a farmer's home, such as it used to be, such as it might be, such as it should be always, and such as I am proud to say many an American farmer can boast of, even in these degenerate days of "boughten-stuff gowns" and lack-a-daisical lounging of farmer's girls, who are miserable and tired of nothing to do. How do you like the picture? If well, imitate it. It is a happiness easily acquired.

SOLON ROBINSON.

•••••
PORK—BACON—HAM.—No. 7.

THE difference between hogs that have been well and ill fed consists mainly in the circumstance that the well-fed hogs have their cellular tissue firmly knit together, enveloping firm and well-filled cells of fat. Indifferently-fed hogs have the muscular or lean parts loose and flabby, the cellular tissue and enveloped fat is also loose, and sinks easily on pressure by the finger. The tissues, instead of being firm and elastic, and of a white color, will be found soft, non-elastic, and of an opalescent color, similar to that of ordinarily-formed calves-foot jelly prior to being clarified for table. The fat participates in this color in consequence of the tissues being soft and large, though containing more moisture than those of well-fed hogs, which also accounts for the deficiency of elasticity; the cells are imperfectly filled with fat.

From the preceding details, it will be apparent that a much greater quantity of moisture, or brine, may be anticipated in salting an ill-fed over that which will issue from a well-fed hog; and in practice, such is found to be the case; the moisture withdrawn is replaced on drying by crystals of salt filling up the vacant interstices, which, as these will always be much more numerous in lean than fat hogs, will cause the bacon on drying to be disagreeably salt. The far-famed Westphalian hams have to be steeped prior to cooking, in consequence of this property; well-fed Westphalian hams, a *rara avis*, do not require steeping prior to cooking. It is evident from the property here described that any mode of procedure which will prevent an undue flow of the sapid fluids which exist in the pork, is desirable if unattended with more than commensurate disadvantages. This can be done by applying in the first instance, a

sprinkling of saltpetre. Should the atmosphere, however, be very free from humidity, it may be necessary to use a little common salt, which, from its more deliquescent property, has a tendency to become liquid, (brine,) by the absorption of water from the air, and the fluids in the meat thus accelerate the operation of the saltpetre. This being done, it is to be rubbed, &c., with salt in the usual manner.

The action of the saltpetre when applied as described, is to combine with the water of the fibres and tissues of the meat, thus causing them to contract, rendering the meat less vesicular, or porous, and consequently will not retain so much salt from the brine on drying. The disadvantages are that the fibres of the meat are rendered somewhat hard. In a general way, and under ordinary circumstances of heat and humidity of the atmosphere, it is best to apply a mixture of salt and saltpetre at first. When well-fed hogs are to be cured, if the atmosphere is very dry, salt alone should be applied at first; then saltpetre alone sprinkled over the meat, the brine being afterwards well rubbed in and thrown over the meat; a sufficient quantity of salt to be applied subsequently. In very moist or bad-curing weather, saltpetre should be applied alone at first, unless there is a fear that the meat will decay, in which case salt must be applied. From this cause, it is almost impossible to cure pork in hot weather other than by using salt and saltpetre in combination. These are general rules, the result of experience, which however may be greatly modified by circumstances. Notwithstanding which, they are valuable as rules, and if carefully attended to, will be found on trial worthy of notice.

A great deal is stated by writers on the necessity of well rubbing in the salt, &c.; as this cannot be performed by the bare hand on the large scale, some curers furnish their workmen with brushes furnished with a strap nailed across the top for the hand to go through; with these, the outer skin of the bacon is well rubbed. I am not inclined to put a very high value on the act of rubbing, in itself; in doing so, however, the operator necessarily more fairly distributes the salt, &c., and the whole of the skin gets softened; for nothing causes pork to take the salt so well as the whole of the skin being made soft, and in the ordinary mode of placing side upon side there always exist patches that remain hard. Rubbing, continual shifting, and turning the sides almost entirely remedy this defect. For curing pork, a dry room with a trough formed of slate passing along each side

and end of the room, and not more than twelve inches deep, is the best; it may, however, be made of stone, wood, or wood lined with lead. Slate and wood lined with lead will be found the best, the former to be preferred. Wood alone is the worst material that can be used.

The sides being all prepared as previously described, salt and saltpetre, alone or mixed, are to be sprinkled over each, and then laid on each other until eight, ten, or a dozen sides are heaped together, the number varying according to the thickness of the sides; half a dozen will, however, be found the most convenient number. In the course of 24 hours or a couple of days, according as the salt is converted into brine, the sides are removed, rubbed, and replaced in an inverse order, the topmost being this time placed at the bottom. A little fresh salt is sprinkled between each course, and the brine thrown over the whole. In very damp weather, the brining should be omitted; if so, the sides should be well washed and rubbed in the brine previously to repacking. In favorable weather for curing, once turning and replacing will be found sufficient, and will not occupy more than a week. In packing, the skin or rind side, is invariably placed underneath. If needed, this packing, rubbing, and salting are repeated. When completed, the sides are taken down, wiped dry, and laid on rough canvass cloth, the first side with the skin underneath. Bay salt is now copiously strewn over it; the next side is laid with the ribs lowermost, and the skin uppermost; another side is then laid on this, with the skin lowermost; another sprinkling of salt, on which is laid a side with the ribs lowermost; the canvass wrapper is now drawn over all, and corded. This is the mode the green bacon is sent to the metropolitan market from Ireland, it being found that, if smoked and perfectly dried in Ireland, it does not preserve so well as when forwarded "green," and then stored in the vaults of the various London wharves, from which it is drawn in order to be smoked as may be required for consumption. The west-of-England bacon is sent to London, ready dried, by land carriage; it is only by sea carriage that bacon is obnoxious to damage when dried and smoked ready for consumption.

In curing hams, a trough being provided as described, they should be first rubbed with a mixture of salt and saltpetre, then laid with the shank end lowest at an angle of 45 degrees, and so on with every row; at the second or third day, they should be well rubbed with the brine and salt, set up as before with a little

fresh salt and saltpetre; in two days more they should be again rubbed, and packed flat and as close as possible, the thick part of one row, against the shank of the next row, by which means, the whole will be nearly covered with their own pickle. In a week or ten days, they will be cured and ready for drying, which should be done by taking them out of the pickle, setting them upright with the shank downwards, and a little dry salt thrown over the thick end. After being thus left for a week longer, they will be ready for hanging up in the drying house, which is in fact a slow stove.

Bacon and hams are smoked by being first damped, and then thrown amongst some dry bran, which adheres to the meat, and prevents it being disfigured by the soot; they are then hung up in a flagged room, with a channel running down the centre, towards which the floor inclines on each side. Brasiers filled with sawdust are now lighted, the room is closed and left. When the fires are extinguished, and the bacon is supposed to have absorbed as much smoke as it can, the place is again entered, the bacon and hams taken down, the bran, with its attached soot, is brushed off, the bacon is now ready for market, as seen at the retailers. The fat which has dripped from the bacon in smoking is collected from the receptacle at the end of the gutter, the dirt and ashes swept out, when the place is again ready for another lot. The fine flavor of Westphalian hams is stated to be due to the circumstance of the smoking rooms being made so high that the smoke is cold when it arrives at the hams. This may be the case in part. I rather attribute their flavor to arise from the fact of the pigs being of a small thin breed, and not killed until they are at least two years old. To have a ham in perfection, the hog ought to be three years old when killed; to feed such would not pay the farmer. In salting pork for bacon, $1\frac{1}{2}$ pounds of salt is sufficient to salt 14 pounds of meat, or 200 pounds would require 24 pounds of salt; and with great care and attention three fourths of an ounce of saltpetre is sufficient for 14 pounds of meat, or 1 pound for 280 pounds of meat. It is a safe practice to use one ounce of saltpetre to 14 pounds of pork. These quantities are adapted to private use; large curers use more of both articles.—*Jour. Royal Ag. Soc.*

PER-CENTAGE OF ASH IN WHEAT.—It is a curious fact that the larger the crop of wheat, the smaller, in general, is the per-centage of ash in the grain.

IMPORTATION OF FRENCH MERINO SHEEP.

MR. SOLOMON W. JEWETT, of Vermont, has recently returned from a tour in France, whither he went for the purpose of selecting a choice flock of the large French Merino sheep, bearing such high prices and so much admired in the United States. Mr. J. shipped, all together, in four different vessels, 150 ewes and two bucks. We had the pleasure of examining a part of this importation and found them very large and fine, and exceedingly well woolled. They are partly from the celebrated flock of Mr. Guerins, in the department of Eure et Loire. Mr. Jewett has kindly furnished us with the following brief account of his visit to France, and his importation:—

I spent 30 days in France, examining the different flocks of sheep, visiting the government and model farms, and their state and district exhibitions of live stock, and satisfied myself that there were but a few flocks there of this class of large Merinos, pure descendants from the original Spanish.

Mr. Guerins purchased a buck at Rambouillet, at the government sale in 1850, and says it was the best one sold. He sheared 21 French pounds of wool at 17 months' growth, and in May last, 19 French pounds, at 11 months, unwashed, but of a beautiful quality of wool, equal to $44\frac{1}{2}$ American pounds, at two clips. This flock at Rambouillet was one of the handsomest in France, but not of so large frame as some of the neighboring flocks, which I think is accounted for by the too close in-and-in breeding for many generations; still they have attained a great size and perfect symmetry, far superior to any of the American Merinos, in my opinion. The sheep have been under the control of the two governments, France and Spain, for several centuries, and they possess at this time valuable, distinct and peculiar characteristics, not inherited by any other class of fine-woolled sheep. Far superior in size, heft of fleece, which holds its quality, with stout limb, large chest, strong constitution, while theory heretofore has been, that we could not breed fine wool on a heavy-muttoned carcass. These sheep will compete with the best English breeds for mutton, I am satisfied by my own taste, and what I saw on exhibition in France.

I saw high grade Merino wethers fatted for the butchers that would weigh 250 pounds, in lots of 20 or more. They are kept with less trouble and less feed, considering size, than any other animals, as they never roam over the fields like other sheep; they inherit this pecu-

liar trait by the long line of breeding. Constantly led to the pastures by shepherds, they have not been allowed to roam far over the fields for hundreds of years past. The ewe lamb you saw was got by the Rambouillet buck, out of Guerin's flock; and when in France, he was the most noble-looking animal of the species I ever saw; but the 60 days' journey which he and the flock have made, has reduced him and them so as hardly to make a respectable shadow. These ewes, some of them, weighed 200 pounds, in France, and the smallest sheep of the 140 ewes weighed 130 pounds. S. W. JEWETT.

LAW OF OVERHANGING TREES.

Few questions are of more importance to those having farms and gardens, than that raised in the case of *Martin vs. Boyes* and another, tried the other day before Mr. Baron Platt, and reported in the daily papers of last week. We mean the question, "In what cases is a person whose trees project beyond the boundaries of his own property liable to have them lopped, and by whom?"

In the case referred to, it appears, from the opening of the learned counsel, that the plaintiff had a house in the principal street of Beverly, with seven acres of ground attached to it. In front of the house, facing the street, were some very fine elm and chestnut trees, which overhung the wall bounding the plaintiff's grounds, and extended over the street, forming a great ornament to the town, shading and protecting the house, and acting as a shade and shelter to the inhabitants during sunshine and rain. One of these trees intercepted the view of the King's Arms sign on an adjoining tavern, the landlady of which complained that her sign could not be perfectly seen, on the market days, and sent a notice to the plaintiff to lop these branches. The plaintiff appeared not to have paid attention to this notice, and the landlady made her complaint to some of her friends in the town council, of which two of the defendants were members, Mr. Boyes and Mr. Crump. The town council decided that the branches of the trees overhanging the street must be lopped. Accordingly, the town clerk sent the plaintiff a notice to this effect, and some correspondence ensued, which resulted in the plaintiff, by his attorney, threatening to bring an action against any one who damaged his trees. Before the terms of this notice had expired, on the 26th of February, early in the morning, a number of men, under the direction of one Wood, a market gardener, who it ap-

peared acted under the direction of the two defendants already named, came to the grounds of the plaintiff, and severed the large branches of fifteen trees which overhung the wall. Thirty large branches were severed from two to thirty inches within the wall. This was the act of which the plaintiff complained. The defence set up was, that the road belonged to the corporation; that the trees were a nuisance, both public and private; and that the corporation have a right to lop them. The jury, however, returned a verdict for the plaintiff, with \$1,500 damages.

Now it is, we apprehend, perfectly clear, on the one hand, that there are cases in which trees projecting beyond the boundaries of their owner's property may be lopped with impunity; and that, on the other hand, if a person not legally entitled so to do, interferes with another's property in the above summary manner, he will deservedly be compelled to pay a large sum of money by way of damages, and perhaps be held to come within the malicious injuries to property act, which would entail still more serious consequences. It is, then, of great importance that the public should know under what circumstances trees may or may not be lopped by persons other than their owner.

Trees which project beyond the boundaries of their owner's property are considered as a nuisance: if they project over a public highway, so as to interfere with the free traffic thereon, they are a public nuisance; if they project over the land of a private person, his rights of property are interfered with, and the trees are a private nuisance. In the first case, where the trees interfere with the free traffic on a public highway, they may, it would appear, be lopped by any one who has been thereby prevented from enjoying a free use of the way, but no other injury he may sustain will justify him in taking such a course. To quote the words of the present Chief Justice of the court of the Queen's Bench: "It is fully established that if there be a nuisance in a public highway, a private individual cannot of his own authority abate it, unless it does him a special injury, and he can only interfere with it so far as is necessary to exercise his right of passing along the highway; and without considering whether he must show that the abatement of the nuisance was absolutely necessary to enable him to pass, we clearly think that he cannot justify doing any damage to the property of the person who has improperly placed the nuisance in the highway, if, avoiding it, he might have passed

on with reasonable convenience." Although, therefore, the trees in the case of *Martin vs. Boyes*, intercepted the view of the King's Arms sign, still, as they did not obstruct the free traffic on the road over which they hung, the defendants were not justified in lopping them.

In the second case, where the trees overhang the private property of another, it seems clear that the owner or tenant of such property may lop them, if the owner of the tree refuses so to do, after notice; *Sic utere tuo ut alienum non lēdas*, is a well known legal maxim, and no person has a right to plant trees so near the boundary of his own land, as to cause them to overhang the land of his neighbor, and to interfere with the vegetation, or obstruct the light from it. Our readers must, nevertheless, take care how they lop their neighbors' trees; they must not forget that lapse of time may give a person a right to continue that which was at first only permitted; and that, although upon the principle which makes every continuance of a nuisance a new nuisance, giving a fresh cause of action, it would seem that the mere fact of the trees having overhung another's land, affords no reason why they should continue so to do; yet, in a case which occurred some time ago, where a person being sued for a nuisance, occasioned by the manufactory of candles, defended himself on the ground that three years before the plaintiff became possessed of his property, the defendant had lawfully enjoyed his factory, and carried on the trade of a chandler there. Mr. J. Park said, "20 years' use would legalise the nuisance." They should also be quite sure that the trees do overhang their land; they must be careful to ascertain where the boundary of their property is; for nothing is more common than for a person to suppose that his boundary is where, upon strict inquiry, it turns out not to be.

That "every one should know as much law as will enable him to keep himself clear of it," is an old saying, in the wisdom of which we have no doubt that these defendants by this time fully concur.—*Gardeners' Chronicle*.

RED ANTWERP RASPBERRY.—We hear of magnificent returns of labor, land, and capital devoted to this splendid fruit. One horticulturist, in Connecticut, realised \$800 for his last year's crop, on half an acre, while the huckster to whom he sold them gained nearly as much more. \$3,000 per acre is rather tall picking for an acre of small fruit; but at present prices, this amount can be realised.

SKYLARKS.

THE farmers *proper*, and the farmers *poetic*, seem to have a conflicting time of it in England, as to the injuries and benefits conferred to the farming interest by this long celebrated bird, as we learn from the *Agricultural Gazette*; the *profit* farmer insisting that the skylark does more damage to the springing and ripening grain than it compensates for in its destruction of worms and other insects which prey upon them.

Not being Englishmen, we cannot well judge of the merits of this controversy; but a reading of the arguments of the disputants, *pro* and *con*, demonstrates most clearly that is nearly a drawn game with the poor bird itself. Our youthful reading taught us to love and reverence the skylark, and we confess to a present sorrow in hearing the virtues of our long cherished bird charged as doubtful. But, like the hares and the foxes, we presume the skylark will ultimately come out the victor, as his delicious song, and poetic reputation, will let him off among the landed proprietors, in spite of his occasional peccadillos, as the depredations made by the aforesaid hares and foxes are excused for the fun of the sportsman.

It is yet a nice question in this country, as to the benefits rendered, and injuries inflicted by some of our own field songsters. And we trust that some of our ornithological friends may find the time to examine and report more fully than has yet been done, on the good or bad qualities of some of the birds which frequent our farms, and whose reputation for the greater good or evil they do is somewhat equivocal.

MR. VAIL'S SHORTHORNS.

ALLOW me a space in the columns of your paper, to say, that it may not be inappropriate to inform the breeders of cattle that at my public sale of shorthorns, on the 26th of June last, I retained about 14 head for breeding purposes, and that the largest proportion of these are of the Bates importation of cows and heifers, out of their get by my Bates' bulls, Duke of Wellington and Meteor.

The latter bull, with the fine bull Fortune, will, this season, be bred to my herd, or until I receive from England a fresh and appropriate cross, to breed to the heifers of Wellington and Meteor. I now have an order in England to purchase for me a young Duchess bull out of one of the celebrated Duchess cows, bred by the late eminent breeder, Thomas Bates, Esq., and also an order for two heifers possessing the blood of the same herd, and to enable me

to meet the frequent demands made on me for this particular blood, I have added to my present breeding herd, by purchasing, a fortnight ago, eight thorough-bred Durham cows and heifers of great substance, fine symmetry, and so far as developed, excellent milking qualities, of the Messrs. Lathrops, of Massachusetts. The most of this purchase, also, has the blood of Mr. Bates' herd through the bull Yorkshirman, bred by him, and imported by Mr. Joseph Cape, of Pennsylvania, in 1839.

I have retained all the heifers in my herd out of my Bates' importation, except the two I sold at private sale on the 26th of June, the day of my public sale. One of these was sold to Mr. Remington, of Philadelphia, and the other to Mr. S. Chapman, of Madison county, New York.

Troy, August 8th. 1851.

GEO. VAIL.

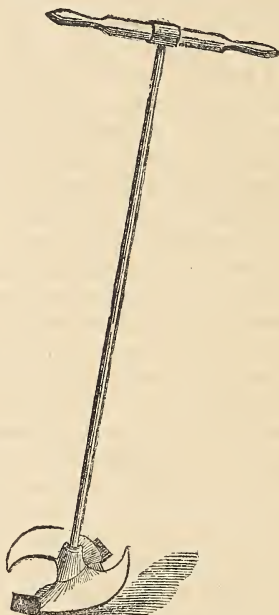
A PATTERN OF A LANDLORD.

THE publisher of the *Agriculturist* made a pleasant trip up the Erie Railroad the other day, and among the agreeable things he met with, was Field's Hotel, at Narrowsburg. We are not disposed to puff everybody nor everybody's house, and if we were, it would do no good in this case; because this house is known not only by most travellers upon this road, but by a great many others, as a delightful location to ruralise in during the dog days, and to hunt, fish, eat and sleep comfortably in at other times.

But this is not to the point. The publisher went to Mr. Field's a stranger, and as a common traveller, without making known his position as an agricultural book publisher, or connected in any way with this paper; but the landlord accidentally learning who he was, took most special pains to pay him marked respect and kind attention, because he had done so much for the farmers to enlighten and improve their minds. But this is not all. He absolutely refused to receive any pay of Mr. S., alledging as a reason that he had taken the *Agriculturist* ten years, and had paid the regular subscription price; that is, \$10 for the whole term; "while," said he, "I have been benefited more than ten times that amount, and always have felt as though it would give me the greatest pleasure to welcome the editors and publisher of that work to my house, as some little return for the information and amusement it has afforded me during so many years. No, sir, you cannot pay a bill in Field's Hotel—you are my guest—my friend—the farmer's friend—an old acquaintance I am glad to welcome." We are proud to say we have hosts of just such friends, throughout this great country.

POST-HOLE AUGERS.

THESE implements are made of convenient sizes and lengths to be worked by a man for boring holes in the ground, of dimensions suited to posts of any required sizes. They lift the soil from the hole as it is bored, without the necessity of using a shovel, spade, or post spoon. They also serve for testing the character of the subsoil, or for exploring in search of clay, sand, gravel, or marl.



POST-HOLE AUGER.—FIG. 58.

CULTIVATION OF THE FOREIGN GRAPE IN THE OPEN AIR.

I READ in the *American Agriculturist* for November, 1850, at page 339, the following sentence relative to the culture of foreign grapes: "We have committed a fundamental error, and that is, in placing our principal dependence on foreign varieties." This assertion, I think, needs qualification—say for localities north of the Potomac, at least.

Again, Downing, in his January number of the *Horticulturist*, emphatically says: "The thing is impossible." I am very glad to find that so great an authority as Mr. A. J. Downing thinks so; because I shall *certainly* try to surmount his "impossible thing."

A few months ago, I added to my then existing stock, several hundred varieties of the vine, from various parts of the world, an enterprise I have not undertaken with a faint heart, nor a want of perseverance, industry, or a knowledge of the subject. My location, you are aware,

consists of a series of sand hills, overlying a clay subsoil, out-cropping at the water's edge of the creek, with beds of white or green marl underneath. With the aid of these elements and an abundance of muck taken from the branches of the creek, I find no difficulty in making a soil to my liking.

I have planted my vines at different periods, of course, as they have arrived from Bordeaux, Oporto, Malaga, Palermo, Madeira, &c. In 145 days, that is, from the moment they began to grow to the 10th of August, some of them yielded fine bunches of sweet grapes, the chasselas, the Muscat de frontignan, and other celebrated varieties among the number. The Muscat was as perfect as I have ever eaten in the south of France. You probably are aware that the average number of days of the best vintage in the south of Europe is about 140; so the maturity of my grapes was not very far from the mark. They had been only seven months in North Carolina.

I perfectly agree with you and Mr. Downing that our best dependency is on our *native seedlings* of European kinds. I do not expect, however, that every variety I have imported, is going to succeed equally well, even in this climate. That would be hoping too much. Time, the corrector of all errors, can only disclose to us the truth.

In travelling through the southern regions of our country, I was forcibly struck with the immense number of wild vines which met my eye on all sides. I therefore determined that Nature should not speak such plain language in vain, and resolved to graft all that were on my premises with European cuttings. This I did; and in the course of the same space of time, as in my other vines, they bore bunches of grapes. This, again, was unexpected by me. The growth of the wood of these grafts can scarcely be believed. Many of them have grown from 80 to 100 feet in length, of good, healthy, hardy wood, and are three or four inches in circumference above the mother stock.

In addition to the foregoing remarks, I might state that I am improving our native wild grape. I have some already that promise well. I have also, at least a hundred seedlings from the Malaga and other grapes. You see, my dear sir, that I do not neglect anything. I daily expect a bundle of caper plants from Marseilles. I think the locality well suited to it, with plenty of marl.

What you say of Professor Johnston's views of the United States with regard to vegetable

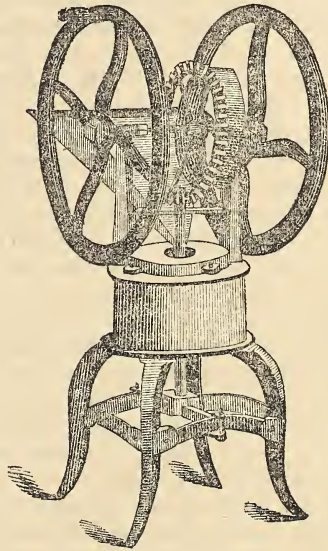
productions, may be said with reference to Mr. Downing's sweeping generalisation, and your own in reference to European grapes. There is no generalising of vegetable productions on so vast an extent of soil and climate. We must qualify all our assertions, and to say that the other wild grapes even here are as sweet as the *Skau-per-nong*, (in Indian, sweet water,) would be equally absurd. One thing is certain, that our wild grapes are vastly superior to any wild fruit I know of; and therefore, I have got many varieties under training, hoping by education, to domesticate them, so as to make of them, at least, good wine, if not good table grapes.

Diccoleaux, N. C., 1851.

JOSEPH TIGNO.

NEW RICE HULLER.

This machine is one of recent improvement, and will hull from two to ten bushels per hour,



RICE HULLER.—FIG. 57.

according to its size. For a description, see page 280 of the current volume.

SHADE IMPROVES THE SOIL.—Dr. R. T. Baldwin, who has lately made public his experiments, contends that the best, because cheapest and quickest way to fertilise any soil, is to cover it with any substance which will first shade and then decay upon the surface, such as straw, leaves, bushes, or green crops of clover, peas, &c. He contends that soil, when shaded, undergoes a chemical process analogous to putrefaction, which fertilises it astonishingly. The subject is worth thinking and acting upon.

BIRDS.

THE song of birds is one of the most exhilarating pleasures of country life. Everybody should encourage their presence—with *some* exceptions. Aside from their delicious melody, and their familiar, gentle habits, they do us infinite benefit in the destruction of insects so annoying to our labors, and frequently so destructive to our hopes of the coming fruit, grain and vegetable harvests. Let the young children be taught to love the birds, and not to destroy nor disturb their nests. Birds find out who their friends are as readily as human beings do, as their annual and continued presence at those spots where they are kindly treated, and their absence from those at which they are disturbed, most strikingly indicate.

The same warbling little birds for consecutive years have built their cozy nests in the same honeysuckles near our windows, and poured forth their sweet melody from the same branches in the lawn, while their innocent progeny have colonised in the neighboring shrubbery and trees, and every year they return to gladden our home with their joyous company. While we now write, a most enterprising cat bird has dropped her peevish mew, and is emulating the mocking bird, as she frequently does, in throwing off her richest notes in the sun and breeze of a July morning from the branches of an adjacent willow.

We have said "with *some* exceptions" the birds should be encouraged. It is difficult to enumerate all the birds that should be welcomed to your premises. Their names are almost legion. We should require the volumes of Audubon to give a full list of the varieties, and therefore name the chief among the exceptions. We take it that you grow fruits of all kinds which flourish out of doors in your climate; and that you also grow grain and vegetables. All birds, not of prey, feed more or less on grubs or insects; therefore, according as they spend their time with us, they are useful in destroying them, and of consequence do us a benefit. Yet, in the balance sheet of profit and loss, some of them stand charged on the wrong side of the account.

In this little category, we will begin with the crow—and most heartily do we wish that we never knew the hateful creature. Some people who have more sympathy than discrimination, advocate the crow, and say that his destruction of worms, grubs, and beetles more than compensates for the damage he commits. All that we have to reply on this head is, that we wish all such peo-

ple had *our* crows for one season. They would change their opinion. In the first place, he has neither song nor beauty—nothing but that perpetual, impudent *c-r-a-w, c-r-a-w*, to harass your musical nerves, and his black, unseemly carcass, to vex your eyes. With the early sowing of your spring wheat, he is forever in your fields, scratching, pulling, and devouring; and from that to the barley, peas, and oats. On your springing corn field, he is both the walking and flying embodiment of "war, pestilence, and famine," making your labor twice or three times over, and demanding of you the full time of the coming Sunday to rid your heart of the perilous stuff that a week's impatience, bad temper, and imprecations have committed. He attacks your cherries, your apples—I had a large young orchard of fine apples carried off piece meal by them last year—your fruits of all kinds, that he dare approach; and in the harvest season he is at his plunder again on everything in general. Now don't tell of shooting, poison, and scare crows! He can smell powder as far off as you can see him; his insatiable maw is poison proof; and scarecrows are his most intimate friends, for I have often seen him perched upon the top of one's shoulder. In short, the crow is an abominable nuisance—gluttonous, filthy, and obscene. Destroy them in any and all ways possible. They deserve no quarter, young nor old, at your hands. For every grub or caterpillar they destroy they take ten times the worth in grain or fruit, and do you no good whatever. If it be said that "rid yourself of the crows and your diminished crops would suffer for it," we answer that there are large districts of our best agricultural country where no crows are seen, and the favored inhabitants have not yet discovered the want of them.

The red-headed woodpecker is another bird of no value. He is not

"The woodpecker tapping at the hollow beech tree,"

in Moore's agreeable song, and a far different bird from the "yellow-bellied woodpecker" of Wilson and Audubon, and "yellow hammer," and "wakeup" of the country people, which last is a bird of agreeable and early song, and mainly harmless. The red-headed woodpecker is frequently injurious to young fruit trees in perforating their bark, which he does not always to catch insects beneath it; for in his capricious hammerings he more frequently bores into the healthiest among the orchard trees than into the diseased ones. He carries off your young cherries, even before they are

ripe, and dives into the choicest and best-grown apples of your orchard. In compensation, he gives you no song, and his destruction of ground worms is quite doubtful. Suppose he does now and then take a stray caterpillar from your trees which your own want of early attention has tolerated, it is but a lame apology for your negligence, that has suffered the vermin to fatten on your best foliage for the said woodpecker's benefit. This bird is another exception, and I would not harbor him.

Next in our catalogue stands the cedar bird, or cherry bird, as he is more commonly called in the country. He is a pert, natty, sleek, little, drab-coated fellow, with no song but a solitary *p-e-e-p-e* about him, and scarce ever at hand except when your cherries are ripe, and then he comes from nobody knows where, in myriads for their destruction. That accomplished, he is off again until your next year's cherry harvest. They have one good quality, however, and that is for the table. They are a good eating bird, and for that purpose just as good game as woodcock, or a wild duck, which no one thinks it wrong, although they do no harm, to destroy. Cedar birds, therefore, are fair game, and justifiably so; for, in permitting them to harbor about us we lose our cherries, and of course our labor and profits.

The common robin, or red-bellied thrush, of our country has so many kind and social qualities about him that, although something of a cherry trespasser, he is entitled to our friendship and toleration—even our affection. His song is sweet. He cheers us with the earliest melody of the season, when the spring breaks upon us, and with the bluebird, and song sparrow, is one of the welcomest heralds of the budding year. Late, too, in autumn, when the November winds are moaning in the naked branches of our trees, he reluctantly leaves us to the sad cheerlessness of winter, and even then oftentimes lingers till the deep snows drive him to a warmer climate. An additional cherry tree or two will amply compensate the *toll* that he exacts as his compensation for the myriads of insects and worms that he takes from our grounds, and in the main account, he does us much more good than evil. Therefore, save the robins.

Another bird or two, as the kingbird and blackbird, might be named, which are somewhat doubtful in character. The one is accused of destroying our bees, and the other of preying upon our barley and oat fields. But

they are great exterminators, also, of noxious insects; and it does my heart so much good to see their implacable hatred of the crow and other *foul* birds, which they frequently drive away from the premises, that we gladly excuse their little peccadillos upon our treasure, for their valuable labors in that line.

To sum up the matter—save the robins, the blackbirds and kingbirds; but wage war, unrelenting war, upon the crow; let the boys practise their shooting irons on the red-headed woodpeckers, and fricassee, or pot-pie the cedar birds with all possible dispatch. L. F. ALLEN.

POULTRY RAISING.—No. 7.

In regard to the best laying fowls, I have just received a letter from a friend in Rhode Island, one of the best breeders in this country, who says: "I keep 45 distinct and pure breeds of domestic and aquatic fowls, nearly all of which I have imported at a great expense. I have been a fancier and breeder 35 years, and have had all known varieties of domestic poultry; and should a friend ask me which breed I have found best for profit, in all candor, I should say, if your object is eggs, then by all means keep the black Spanish."

Now, a statement like the above, from a gentleman who rears fowls for his own amusement, not for profit, as he writes me, having no interest in saying anything but the truth, I consider highly important. I had already formed a high opinion of the black Spanish fowl, from the universal good opinion of them by almost every writer, and had taken measures to secure a fine selection, as well as of white Dorkings and one or two other breeds, that I have every reason to believe are not humbugs. I have no "hen fever," but when evidence comes to me in an overwhelming shape, that certain breeds of fowls are valuable, I shall be willing to give them a trial. Gentlemen interested in this matter may rely upon receiving through me, in this paper, nothing but what may be depended on, as a candid exposition on the subject—unprejudiced and uninfluenced by interest in any form.

By the way, what is the matter with "Reviewer?" He hopes all poultry essays will "have their necks wrung," &c. Now, I am afraid that this old *cock* has been sadly *hen-pecked* lately, since he seems to *crow* less melodiously than formerly, and he *spurs* both friend and foe; frequently *pecking* awful flaws in the logic of your correspondents. Can it be that the great breeder is about consigning him to

the *spit*, (heaven avert it,) to make room for a young brood more prolific? T. B. MINER.

Clinton, Oneida Co., N. Y., 1851.

•••••
THE TRAVELLER.—No. 7.

WE took our last siesta in the shade of Stone Mountain. Let us awaken at the whistle of the locomotive, which has penetrated even into the solitude of the recesses of this granite wilderness.

It is March 10th. The morning, cool and frosty in this elevated part of Georgia—the evening delightful. Farmers and gardeners are all busy plowing and planting corn and vegetables, and preparing land for the great staple crop of the south. It is a lovely country and salubrious climate; but the green pastures and sleek, beautiful occupants of pastoral countries are not here. It is said, grass and clover does not flourish in this climate. Has it been tried upon deep-tilled, highly-manured land sufficiently to prove it will not endure the heat of summer? Grass requires deeper tillage to prepare the land than is usually given in the south. It also requires to be moist and rich. Some of the swamp lands possess both the latter requisites, and might possess the other, if the owners would plow as some of the northern grass-growing farmers do, ten or twelve inches deep. If Georgia farmers will so prepare such land and seed it to grass and then spread, every year, over the surface, a coat of straw or coarse manure, to serve both as a shade and fertiliser, it is my opinion they can stop the transit of some of the bales of Connecticut hay, which annually find their way up this road, 200 or 300 miles into the interior of one of the best states in the Union.

Madison.—This is a lively, fine county town, 60 miles below Atlanta, on the railroad, containing about a dozen stores, good court house, tolerable fair hotel, and a general appearance of somebody alive having been about there within the last century. But that which gives it the most lively and interesting appearance, is what the town should be most proud of—the several large schools. Here are two seminaries for girls, containing nearly 300 just in that joyous period of life known as the *teens*. These two schools are under the patronage of the Methodist and Baptist churches, the leading sects of the country, and both are constantly exercising a rivalry which results in great benefit to the whole country.

Among the citizens of Madison are many wealthy planters, some of whom own planta-

tions in the western states, but prefer this lovely healthy spot for a residence.

It is surprising to see how little attention is paid to growing good fruit in this part of Georgia, where the soil and climate seem so well adapted to its production. Only a few farmers seem to feel an interest in trying to improve their orchards. One of the few is General Jessup, who has a fine cottage a couple of miles out of town, where he is making efforts to have one of the best orchards the country is capable of producing. The land is somewhat hilly, clayey soil and gravelly—rocks, granite, and slate. Timber, oak, chestnut, pine, &c. He says he produces the best peaches in the world. No doubt they are very good, if not superlatively so. The Skuppernong grape is the only one that grows to perfection here, as well as generally throughout the south.

March 12th. Farmers are now busy planting corn. The usual stand is one stalk in a place, three and a half by four feet apart, or two stalks four by five feet, and the average yield 10 to 15 bushels to the acre. The weather is now as mild and lovely as May or June at New York.

Cotton, the staple crop here, is planted about the first of April, three by four feet apart, and yields about 600 pounds in seed, to the acre, which makes about 200 pounds of ginned cotton.

Greensborough, 20 miles below Madison, is another county town; but it has not that lively appearance, though it contains a good many gentlemen of wealth and intelligence, among which may be ranked Dr. Poullain, planter, merchant, and cotton manufacturer, who has lately built a very tasty residence, and is ornamenting and improving his grounds as every gentleman who has the means should do, so as to make home attractive and pleasant to every member of the family, as I believe is the case with him. Senator Dawson, who is said to be an improving planter, also resides here. One evidence of his disposition to improve, is the fact that he bought two tons of Peruvian guano last spring, to experiment with upon cotton. I very much fear, owing to the drouth the result will be such as to discourage him from continuing its application. But I hope Mr. Dawson is too good a lawyer to give up his case because one witness may fail in giving him the right testimony to sustain it.

Speaking of lawyers, reminds me that some of the most improving cultivators of the soil, are gentlemen of this profession. Why? Because they are reading men. They are disposed to

look to every source of information by which they can gain knowledge in the profession of farming, as well as law. One of this class is Judge Cone, an attorney of this place, who, though far less interested than many other gentlemen, seems to take a delight, whenever he visits New York, in strolling through your great agricultural warehouse, looking by the hour at the great improvements which have been made in all the implements of husbandry, since the day when the old clumsy wooden moldboard Carey plow used to kick his shins upon the rocky hills of Connecticut. And that is not a long age ago, for there I, too, learned the trade of plowman, by the same ill-contrived machine, and an equal amount of hard kicks.

Mr. John Cunningham, merchant, manufacturer, and planter, is another of the gentlemen of Greensborough worthy of mention and commendation in every agricultural paper in the country, for he is one of their most active and influential friends. He says wherever these are taken and read, men improve, and the crops are increased one hundred times more than the papers cost. Mr. C. has done a great deal toward introducing improved tools among the farmers of Green county, and is constantly trying by words and example to induce them to adopt such a system of tillage as will renovate and restore to fertility the old fields that now blot the fair face of nature, and make this once rich and lovely land look like a land of desolation, wasted by the wicked hand of some destroying power, instead of the wasteful ignorance and mismanagement of the very people who should have preserved it even unto the third and fourth generation.

There are several other gentlemen entitled to high credit for the efforts they have made to arrest this destroying process, and save this fine country from destruction.

Union Point.—This is where the road from Athens unites with the main stem, seven miles below Greensborough, 39 from Athens, and 75 miles from Augusta.

Let us rise up and look out upon this blessed March morning, so like those of lovely May with us, and as we shall find but little to interest us in looking over the country, we will hold a most social and animated discussion with these Georgia farmers on our trip up to Athens. The rapid movement of the freight train with an attached passenger car of a most dirty and uncomfortable appearance, won't prevent our conversation. It runs slow and sure. All of these pleasant conversations with the cultiva-

tors of the soil tend to improve it. At Athens we have much to see and say. Let us first take our rest. In another month I hope we shall meet again.

SOLON ROBINSON.

BASKET WILLOW.

Will you be so kind as to permit a working man without the necessary qualifications of a writer, to call your own and the attention of your thousands of readers, to the growth of the basket willow, a subject which appears to me of considerable importance. There are several million dollars' worth of this article imported annually into this country, from Germany and France. An erroneous opinion prevails, that this shrub cannot be grown here. I will simply state that I have some small lots of French, German and English Nottinghamshire willow cuttings, the produce of which is as large, long, straight, and pliable as any growing in the world.

Every farmer will acknowledge, meadow land to be poor that will not yield a ton of hay to the acre, which, when cured and in market, seldom sells for more than \$12. All men who are acquainted with the growth of willow for market, well know that an acre of land ought to yield at least, one and a half tons' weight of it. The cost of preparing willow for market would not exceed \$40 per ton. Now, estimating hay at \$12 per ton, and willow at \$120, deducting from the willow \$40 per ton for preparing for market there is a balance in favor of the willow of \$80 per acre.

Capitalists may think there would be difficulty in finding a market for a large quantity of willow. Although there are some four or five importers of this article in the city of New York, yet, during the present summer, the supply was not half equal to the demand, which increases every year. It must be plain to every observer, who looks into any of the woodenware stores and sees the quantity of willow ware hanging up, that there must necessarily be immense quantities of the raw material used yearly in this country. I have endeavored to collect all the information possible relative to the amount of money paid for willow baskets in the city of New York, and find it reaches over a \$1,000,000, besides the amount for baskets sent to the southern and West-India markets, which would probably reach double the sum paid in New York.

The willow grown here would certainly command a higher price than the imported article, which is pretty well sorted by the French and

German basket makers generally, sending only the inferior qualities here, retaining the best for their own manufacture into baskets to be subsequently imported to this country. I have now at my residence, a lot of imported willow that cost from five to six cents per pound, one half of which is not really worth carting from the store to the dock. It is old and nearly rotten, so much so that it will break almost like pipe stems.

It is principally from France and Germany, that we obtain our supply in this country. There is also a great quantity of willow from the continent imported into England. I do not see why it cannot be exported from the United States into England, as well as flour, corn, Yankee shoes and clocks. The willow grown in this country would of a stern necessity have the preference in market, as the crop would be clean and free from breakage by packing in a ship's hold, a great objection to nearly all the imported willow, a great quantity of which becomes mildewed on the passage to this country, unfitting it to a great extent for use; yet, we are compelled to purchase this inferior stuff, or be idle.

Many of your readers, I suppose, have stood on the banks of the Mosselle, the Seine, the Po, the Thames, the Mersey, the Kingston, the Trent, the Shannon, and the Liffy, and have there seen the thousands of acres of willow.

Plenty of similar land, adapted to the growth of the willow, may be had within range of 100 miles from New York at a low price, with the necessary buildings thereon. I can see no reasonable objection why the manufacture of baskets might not be combined with the growth of the willow.

The experiment of growing willow on a small scale has been successfully made by the lamented Jesse Buel, Esq., of Albany, and by Mr. Bement and Mr. James Wilson of the same city; by the Messrs. Prince, of Flushing, L. I.; Messrs. Brooksby and Brooksbank, of Hudson, and William H. Deming, Esq., of Deming's Point, Fishkill. The latter gentleman has supplied Mr. James Emott, of Poughkeepsie, with cuttings of a good quality, sufficient to plant about 15 acres, which were set out during the last fall and spring, and are now growing very promisingly, on the Fishkill Furnace Farm, Dutchess county. The Hon. Ambrose L. Jordan, also, has a lot of willow on his farm, at Hudson.

In order to form a reasonable estimate of the profits of this business, it is only necessary to go and inspect the lots of willow on the prop-

erty of the gentlemen named above, who will cheerfully, I am sure, state the prices received for a number of years, when it will appear that I am very moderate in my estimate of profits.

Great care should be taken in planting willow in such soils as are best adapted for its growth. Some species will never yield a good crop on wet land, while others will not on lands that are dry. No man should plant willow on his land in large quantity, who has not a stream of water running through the premises.

Should you deem this letter of sufficient importance for room in your valuable journal, and a necessity occur for another on the same subject, it probably may be sent.

WATSON G. HAYNES.

Garrison's Landing, Putnam Co., N. Y.

PROF. NORTON'S LABORATORY AND COURSE IN AGRICULTURAL CHEMISTRY.

WE had the pleasure, a few days since, of passing an hour with Professor Norton, in his laboratory, at Yale college, New Haven. We found him in the occupancy of what was recently the president's house. This has been so altered and arranged as to give the most convenient and ample accommodations to the professor and his pupils, for their varied and intricate manipulations. The arrangements seemed in every respect to combine scientific principles with the most simple, yet efficient means for analysis and experiment; and in this respect, they afford an excellent lesson for the pupil.

The object of this new department in Yale College is thus succinctly stated: "This course is designed especially for the practical farmer. Those who attend it are not necessarily connected with any other department of the college, and do not require any previous preparation. The subjects treated of are presented in such a simple and connected manner, as to be perfectly intelligible to all.

"The substances of which the plant, the soil, and the animal consist are shown and described. The cultivation of the soil, the qualities necessary to its fertility, the means of improving it by drainage, the composition and effect of the manures applied, are all topics of great interest, and naturally lead to the constitution of the crop, the theories of rotation, &c. The remaining department is that of the animal, the character of whose parts is given, and with this the various theories of fattening and feeding. In this part of the course, the products of the soil are also examined, with special reference to their nutritive and economical value."

We are happy to learn that this new depart-

ment is already in a flourishing condition, far more so than could have been anticipated in so short a period, and in an undertaking entirely new in this country. We are fully convinced that we cannot recommend any branch of instruction, and under any circumstances now in existence in the United States, which is better calculated to fit the intelligent, young, or even the middle-aged farmer, for his interesting diversified occupations, than a thorough course of scientific agriculture as taught by Professor Norton, at New Haven.

WINTER APPLES FOR THE SOUTH.

In the purchase of apple trees from nurserymen, young and inexperienced farmers are too apt to purchase at random, stocking their grounds with a large number of varieties whose names are soon forgotten, and whose properties should be; for they will be found, when too late, to be worthless. The following have been tried and proved in North Carolina, and are recommended for other parts of the south:—

NAMES AND DESCRIPTION.	SEASON FOR USE.
<i>The Fall Queen</i> (green, striped with red).	November.
<i>The Fall Pearmain</i> (red with russet spots).	"
<i>The Romanile</i> (red and yellow).	December.
<i>The Boston Russet</i> (a large russet apple).	"
<i>Pryor Red</i> (striped red russet).	January.
<i>The Hall Seedling</i> (small red with white specks).	"
<i>The Vandervere</i> (bright red and yellow).	February.
<i>The Green Cheese</i> (pale green).	"
<i>The Kerr</i> (yellowish green).	March.
<i>Whitaker Russet</i> (yellow, with russet spots).	April.

To the foregoing list, we would add for Eastern Carolina, the famous Mattamuskeet apple, originated at Mattamuskeet Lake, in Hyde county, about 30 years ago.—*Condensed from the Star.*

POULTRY STATISTICS.

I HAVE always read with interest all communications in your paper concerning stock and poultry. In the May number, I find some statistics concerning the laying of hens, intending to show that Mr. T. B. Miner's statements are not quite up to the mark. I think that within the past year, you have had several communications on this subject (perhaps enough); still, I thought I might as well have my say.

I commenced housekeeping, April 1st, 1849; and, as in duty bound, I bought some hens. I got them from different places, and in various ways. Some I bought, while others were pre-

sented to me. Some of them had done laying and wanted to sit when I got them, which I did not let them do until June, when, from 112 eggs were hatched 100 chickens, six of which died the first week. The rest, I raised. I fed them with wheat until they were two weeks old, when they eat corn. I put two broods together, consequently four hens raised them. In summing up my accounts with them, I find it stands as follows:—

Dr.		
16 hens and two cocks, at 5s. per pair,		\$5.62½
16 bushels of corn, at 56c. per bushel,		8.96
½ " of wheat, at \$1.25 per bushel,		0.31½
		\$14.89½
Cr.		
75 chickens sold at 25 cents each,		\$18.75
30, new stock, at 31½ cents each,		9.37½
61 dozen and 2 eggs, at 13½ cents a dozen,		8.15
		\$36.27½
Net profit,		\$21.37¾

In the above table, there is no account made of the eggs used in the family; also three hens died quite early in the season. The gross receipts from each fowl was \$2.01½—cost 82½ cents. Net profit, \$1.18¾. I challenge competition. More particulars some other time.

J. V. D. WYCKOFF.

Somerset Co., N. J., Aug., 1851.

FIGYARD MANURE.

In the construction of a piggery, three important requisites are to be observed, namely, convenience, cleanliness, and economy or facility of making manure. In the selection of a site for such an establishment, it should be located, if possible, on a gentle declivity, in order that one side of the yard may be kept free from moisture or excess of water from rains or melting snows. On the lower side of the yard, a shed may be erected for a day sty, or "eating house," facing a northerly point of the horizon, with the roof sloping towards the south, so that the rain may not run into the yard among the manure; and directly opposite, on the other side of the yard, another shed may be built, facing the south, for a night sty, or "lodging house," with the roof leaned back from the yard towards the north, in order to prevent the rain, as much as possible, from running into the manure.

The yard should be well paved, so that nothing can soak into the ground, in order that the dung, urine, and water from the clouds may mix with whatever may be thrown in, and would thus form one grand slope, the lower side and ends of which, should have a tight wall or barrier, to prevent the loss of manure from the washing of rains, &c.

Thus, in fig. 59 and fig. 60, A, A, denote the "lodging house," 12 feet by 20 feet; s, s, &c., the sleeping apartments, 5 by 5 feet each; d, a door leading into the walk, or passage way h, through which a person can enter to examine the hogs, change their litter, &c.; e, a door for the egress of the hogs from their lodgings into the pasture, eating apartment, or yard; c, a wooden platform, or bridge, leading from the more elevated ground into the "eating house," for the convenience of carrying in food; d, a door leading into the walk, or passage way h, communicating with the spouts of the troughs; t, t, &c., the troughs near which is a grated or latticed floor, sufficiently open to be kept dry, sweet, and clean, and allowing all the excrement and filth to fall into the yard beneath; e, a door for the egress of the hogs from their eating apartment into the pasture, lodging apartments, or yard, over a bridge or inclined plane, to the more elevated ground; y, the yard, with a paved bottom sloping from the lodging house to the wall w, under the lower side of the eating house; P, a pasture, orchard, or paddock, communicating with the eating and lodging apartments, or with the yard.

Whatever be the mode of construction of the sty, it should have one part close and warm, with a tight roof over it; and the other part, containing their troughs, more or less open to let in the light and air; for swine will not bear to be wholly excluded from the weather and sunshine; and it is equally hurtful to them to be constantly exposed to the wet and cold, as well as to the intense heat from the sun. They should be allowed to run at large in a pasture, paddock, or orchard during a portion of the year. To prepare a pasture for them, let the ground be broken up, tilled, and manured, and then laid down with clover. For swine are more fond of this grass than of any other. Let the quantity of land be so proportioned to the number of hogs, that they may keep the grass from running to seed. For this will prevent waste; and the shorter the feed, the sweeter the herbage, and the more tender and agreeable to their taste. One acre of rich land is considered sufficient to support 20 or more swine through the summer, say from the first of May till the last of October.

It should also be remembered, that the pasturing with swine will enrich the land more than by pasturing or soiling with other stock; and by this means, the profit of the farmer will be increased. When it can with convenience be so ordered, it is an excellent plan to make a

hog pasture of an orchard. For, the shade of the trees will be very grateful and comfortable to them in summer; their dung is allowed to be one of the best of manures for the apple; and besides, they will keep the ground around the roots very light and loose, and they will destroy many insects that infest the trees or their fruit. It will also be of great advantage to a hog pasture to have plenty of water in it during the summer; and that which is running is best, as it will afford the swine the most wholesome drink, and at the same time will serve as well

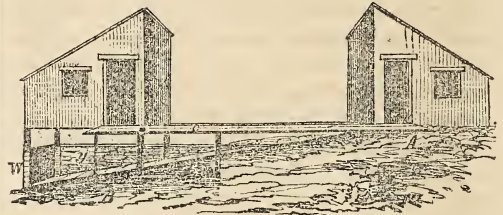


FIG. STY.—FIG. 59.

as any other for them to wallow in; and it will keep them clean, which is no small advantage. But the most dirty puddle is better than none, as they can cool themselves in it in hot weather, which is very refreshing to them, and conducive to health.

A piggery constructed according to the foregoing plan will form a safe and economical receptacle for the dung and urine of the animals, together with whatever may be thrown in

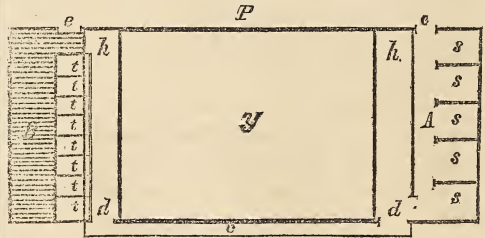


FIG. STY.—FIG. 60.

among them. The refuse of the garden, or other waste matter, as bean stalks, the cods of beans and peas, weeds, dried plants, as well as dried peat, swamp or pond muck, loam, and other earthy materials, thrown in, from time to time, will please the hogs, which they will work over, and produce a quantity of manure many times greater than naturally would be made from the same number of swine. This may be cleared away as often as may be necessary, and used as an excellent dressing for the land, as there may be occasion, throwing in fresh matter in return.—*American Muck Book.*

HUNGARIAN CATTLE.

THE accompanying is a cut of a female of the celebrated breed of Hungarian cattle, procured for Mr. R. L. Colt of Paterson, N. J., by Col. Webb of New York, when minister to Austria.

that his standard of a well-bred animal was not very high, for these cattle are far inferior in their forms to the Durham, Devon, or in fact any improved breed of English cattle. With the long horns of the oxen, they may make rather an



HUNGARIAN COW.—Fig. 61.

When we read Mr. Fleischman's description of these cattle in the Commissioner of Patent's Report, we expected to see something quite superior; but on their arrival here, we discovered

imposing appearance, but they cannot by crossing improve the good animals we already have in this country.

Mr. Colt informs us that they are very hardy,

and eat less, and keep in better condition than any cattle he ever had; but the cow disappointed him in her dairy qualities, all she eats going to make flesh instead of milk.

The color of these animals is a bluish grey or roan, slightly inclined to white. We recommend them to the attention of the curious in such things.

CHEMISTRY OF MILK.—No. 3

I HAVE referred to the fact that milk may become poisonous, or acquire deleterious properties suddenly through the influence of emotion; it may also acquire dangerous properties through other channels. One of the most remarkable instances of poisonous milk occurs in the cows of the southwestern states. It is called "milk sickness." It is an endemic disease and appears in the deep land coves where the spurs of mountains shut in the more level areas. The flesh and milk are both poisonous; but the poison in the former product is confined to the oily part, or cream. Few persons recover from the effects of the poison, and when life is prolonged, the individual drags out a miserable existence. This disease shows conclusively that the secretion is not independent of extraneous influences, and is more or less affected by those causes which disorder the system generally.

I shall now proceed to the consideration of those matters which relate to the composition of milk.

In determining the composition of milk, I followed Haidlen's method. Four hundred grains of milk are taken. It is mixed with 100 grains of gypsum and then boiled; the milk coagulates; is then dried perfectly in a water bath or sand bath upon white paper, which is allowed to brown slightly; it is dried until it ceases to lose weight. The loss it has sustained is water. The dry pulverised mass is exhausted of oil or butter by strong ether. The ether is dissipated by heat, and the remainder weighed. The solid residue is then acted upon by common alcohol which dissolves the sugar and a little extract. The casein of cheese is found by adding together the results and subtracting the sum from the dry mass. To confirm the result, 400 grains of skimmed milk is taken and coagulated with a drop or two of sulphuric acid. The whey is removed by straining, the coagulum dried until it ceases to lose weight. It contains from one and a half to two grains of butter, which is dissolved out by ether. This last method, I have found agrees with the former when both are conducted with due care. The

ash, or saline matter, is determined by drying and burning 1,000 grains of milk, of the same milking. I use this ash for an inorganic analysis.

The results obtained are regarded as accurate, or certainly as very close approximations to the true composition. This method certainly gives results which are comparable. I should remark here that the first three analyses were conducted without the aid of gypsum, the rest were made as stated above.

The first milk which I submitted to an examination was obtained while the cow was feeding upon grass, and about the middle of November. The feed at this time was not abundant, but pumpkins were given every day, which, however, did not appear to add to the quantity of milk which the cow had been giving. The milk at this time had the following composition:—Specific gravity 1,032. Water being 1,000.

Water,	85.80
Solid matter,	15.55
Butter,	5.76
Casein,	5.02
Sugar and extract,	3.83

A quantity of the same milk was churned; it gave per pound of milk 457 grains of butter, which is equivalent to about 5.9 per cent. after deducting the casein—perhaps the casein was not entirely removed.

The composition of the grass cut the 20th of November, I found as follows:—Five hundred grains well dried in a water bath, gave 160.4 grains, or water 339.6 grains. Ash, 11.32. One hundred grains of dry grass gave of

Chlorophyl, or wax,	5.08
Sugar and watery extract,	21.60
Fibre,	73.32

The ash or inorganic part gave of

Silex,	46.12
Earthy phosphates,	16.20
Carbonate of lime,	10.60
Magnesia,	0.86
Potash,	14.63
Soda,	9.40
Sulphuric acid,	0.47
Chlorine,	0.06

The ash of the milk gave nearly 50 per cent. of earthy and alkaline phosphates. The analysis of the grass is given mainly to show its composition at this season of the year. The chlorophyl, or wax, is regarded by Professor Thompson as important in respiration. It is not supposed to furnish the material from which the butter is formed. Its amount is diminished in passing through the system and what is not consumed in respiration appears unchanged in the solid excrements. The sugar and soluble parts in water, as albumen, furnish the materials from which the milk is derived.

Having a quantity of turnip tops intermixed

with small turnips, the cow was confined for five days to the diet. At the end of this short period, the tops began to freeze, and hence were unfit for feeding. The milk now gave the following composition:—

Water,.....	84.73
Solid matter,.....	15.26
Butter,.....	4.76
Casein,.....	7.55
Sugar and extract,.....	3.60
Saline matter,.....	0.78

This analysis shows an increase of casein, a result which might perhaps be expected. The feed imparted to the milk the turnip flavor.

The ash of the turnip tops has the following composition:—

Silex and some adhering sand,.....	16.60
Earthy phosphates,.....	13.20
Carbonate of lime,.....	38.60
Magnesia,.....	1.51
Potash,.....	9.13
Soda,.....	3.94
Sulphuric acid,.....	5.92
Chlorine,.....	6.05

Albany, N. Y., August, 1851. E. EMMONS.

REVIEW OF THE AUGUST NUMBER OF THE AGRICULTURIST.

Pork—Bacon—Ham.—The first sentence of this number, speaking of the way every part of the pig is converted to some useful purpose, in England, conveys or should convey to us a useful lesson of economy. Instead of saving all the offal in this country, we waste nearly all of it. More than 20 years ago, I took a trip through the west, during the pork-packing season. At Cincinnati, I saw six-horse-wagon loads of offal; that is, heads, feet, ribs, and back bones, hauled to the Ohio River and thrown in to feed the cat fish. The pluck, blood, and hair were never thought of as worth saving. I believe the Buckeyes, or some importation of lard-oil-making Yankees, have since discovered that such things are good for something besides fish bait; but in many parts of the western country, the same waste still prevails, particularly of blood and hair—two valuable ingredients for the compost heap. One fact is mentioned in this number of the article, which is worthy of particular note at this season of the year. When the hams are sufficiently cured, mix up a sort of pomatum of lard, sugar, and black or Cayenne pepper, and rub over all the fleshy parts of the ham, especially the end of the hock. It excludes the air and keeps off flies. The worst condition of the atmosphere to cure pork, is, when the weather is moist whether warm or cool, particularly that condition known as “muggy.” Hot, dry weather is not so bad. The writer says pork must hang to cool 16 to 36 hours before salting. I say it is not necessary. It may be salted as soon as dressed.

Goths and Vandals.—The spirit of destruction walketh abroad at noon day, and this correspondent has well named these destructionists, Goths and Vandals; for such wanton destruction of beautiful shade trees evinces a barbarous and uncultivated mind. “Woodman spare that tree,” but do not spare your blows upon those who wantonly cut it down.

Experiments with Fresh and Compost Manures. like a great many other experiments show no practical result. Nothing short of five years’ careful and continued trial will give Mr. Gray perfect satisfaction whether it is better to apply manure fresh or composted.

Chemistry of Milk.—In glancing over the pages of this number, the careless reader would never suppose the article under this caption contained this valuable piece of every-day information, and so I will repeat it; “A five-year-old cow, (known as the Dutch breed,) consumed 22 pounds of hay per day, during the month of December, and drank 44 pounds of water. Her calf, seven months old, ate 12 pounds of hay and drank 17 pounds of water per day. A large horse consumes 31 pounds of hay per day.”

Fattening Animals in Confinement.—I am not going to enter into the merits of this controversy; but if it is right for the farmer to adopt that course in preparing his animals for market, which will bring the greatest amount of money, without regard to the quality of the meat for human food, then is the distiller who prepares meat or milk for market, right upon the same principles. If fatness of carcass is the only criterion of excellence by which the consumer judges the quality of the farmers’ meat, we are fast approaching an enviable Exquimaux condition of life, where man is contented with a diet of whale blubber and train oil.

New Importation of Merino Sheep.—It appears from this interesting letter that we have very little occasion to send to Europe to improve our flocks. We have good ones at home.

Philosophy of Eating.—If this article could be read and properly digested, there would not be so much complaint in the country of indigestion. “Truly,” says Dr. Hall, “nine tenths of all our ailments, acute and chronic, enter the system through that orifice of the human face out of which cometh lies and deceit and all manner of abominations, except the abominable practice of bolting such vast quantities of indigestible, half-masticated food—conduct a respectable pig would be ashamed of.”

Amount of Foreign Flax Consumed in the London Trade.—A very interesting statistical article,

which reminds me to inquire how much foreign flax is consumed in the American trade, which might, yes, ought to be grown at home, if not a little surplus for foreign countries, instead of drawing our own supplies from abroad.

Plowing.—"Never plow wet land in wet weather." No, nor dry weather either. You had much better be employed draining it in all weathers, until it is fit to plow in any.

Wool Growing in Virginia—A Remedy against Dogs.—I am glad you republished this article from the Richmond Whig; for it tells a fact only known to a few, apparently; that Virginia, at this time, offers very great inducements to the flock masters of the United States, to take up her worn-out and abandoned old fields, and convert them into neat, superior sheep pastures. The only preventive of that state becoming one of the greatest wool-producing ones in the world, is the great curse of this country—an excess of mean, miserable cur dogs, almost as worthless as their owners.

Sheep-Shearing Festival.—When shall we have that blessed time which will bring a continual round of these festivals for all our rural population—Sheep Shearings, May Days, Harvest Homes, Corn Huskings, and Apple-Paring Bees? Oh! the good old times of 70 years ago.

Strawberries.—If only one half of that statement about Mr. Peabody's success in raising strawberries is true, the article is worth more than the whole cost of the Agriculturist to all of your subscribers for a year. By the bye, who is this Mr. Peabody? Is he one of our Connecticut boys? If he is, I wish him to say so and speak for himself, and tell us this is a true statement about his growing strawberries from the same vines five or six months in succession. It is wonderful.

Hemp Cotton.—Will wonders never cease? The discoveries of this age are surpassingly wonderful. Who will try the experiment you suggest upon the cotton stalk? It contains a heavy coating of strong fibre. So does the okra plant; the stalks, also, of the mulberry are worthy of notice. But if the same plan will answer to separate the fibre from the glutinous mass of the leaf of the common bear grass, it might be grown to great advantage in the southern states.

Sense of Hearing in the Horse.—Perhaps the strongest instances of acuteness of hearing in the horse is evinced while he is acting as a sentinel, fearing the night approach of some stealthy foe. I have known cases of this which surpass all human belief. As much as man

loves this noble companion, he never fully appreciates his worth until placed with him in eminent peril. The most awful and heart-rending sounds that ever fell upon my ear, were the dying groans of a horse, in a deep wilderness at midnight.

Mulching.—Mr. Allen talks of mulching newly-planted trees. Beneficial, yea almost indispensable as it is to such, it is equally beneficial to bearing trees. I believe I have often doubled my crop of peaches and cherries by this process. I am greatly in favor of mulching, not only orchards, but many other things grown upon the farm. Shade is an undoubted fertiliser. The benefit of that is derived from mulching, and then the benefit of a good top-dressing of manure as it decays.

Orchard Caterpillars.—"Nothing so defaces an orchard as the caterpillar." Doubted. I would rather see a few caterpillars upon a well-trimmed orchard than good trees growing up more like scrub oaks than fruit trees; for, in one case, it looks as though the owner desired and intended to raise fruit, while in the other, it appears as though he cared nothing for the comfort of himself or family. Nothing adds so much to the looks of a farm as a well-trimmed thrifty orchard full of its health-giving, luscious product.

Cranberries.—You are right. It is a water plant, and it is forcing nature to try to cultivate it upon dry land; but there are many places upon our New-England farms well adapted to its cultivation, which I have not the least doubt may be done successfully and profitably. The cranberry culture should be extended, as it may be, until the price is brought within the more immediate reach of the mass of the people than at present.

Keep Your Fruit Trees Straight.—Not at all important. Better straighten a great many other crooked things about the farm. I doubt the fact stated that an erect tree will be longer lived, and more fruitful than a leaning one, and not so liable to casualty. True, I like best to see straight trees; but it is not so very important, and I cannot think of any casualty more likely to happen to the crooked tree than the straight one, except being blown over; and I do not know why the leaning one should go down any quicker than the other.

The Blackberry Culture.—"Their cultivation is extremely simple." That is a fact; one of the most successful culturists I ever knew, was the laziest lout in the whole country. The consequence was, that his "clearing" grew up to a

most luxuriant growth of blackberries, for the very reason that he never raised any other crop, worth harvesting. He was extremely proud of his blackberries, as much so as though he had produced them by careful cultivation. One day, one of his neighbor's children came upon his premises to gather berries, because she could find very few at home; for her father was one of that class who eradicated everything of the kind, without thinking of saving a little patch for family use. Although the blackberry owner had more than he knew what to do with, he had no idea of letting his neighbor enjoy his fruit. So he told the little girl to go home and tell her father to grow his own blackberries—that any man of any sort of industry could raise just as many blackberries as he could use, and not be trespassing upon his neighbors. Now I think just so; a little industry will give every man his own blackberries; and a very excellent, cheap, and healthy fruit they are. The directions for making a plantation of them in the article under review, are sufficient to enable any one to raise his own blackberries.

Asparagus.—Everybody loves it—about one in ten grows it; and about one in ten of those grow it to perfection. But this article says, every person fond of it should know how to produce it every month in the year. That is what I should like to know. Can the writer tell us?

Excursion to Lakeland.—There is one sentence in this article which must strike many of your readers with surprise. It is this: "Lakeland is a new settlement in the midst of the great wilderness, 50 miles from the city of New York." A wilderness, they will exclaim, so near the city, and upon lands, too, so susceptible of cultivation as these lands appear to be? How is it possible that such a tract could have laid idle and unoccupied more than a century in the immediate vicinity of such a city as New York—such a market for every product of the earth? It certainly is strange, but not more strange than it is that much larger tracts have been cultivated in such a way they have barely afforded a very meagre living to the occupants, while the fertility has deteriorated rather than improved. There is much land within 50 miles of New York, which, if not in wilderness, certainly is in a wilderness of intellect, as unimproved and more unimproveable than the tract you have spoken of around Lakeland. REVIEWER.

ONE unruly animal will learn all others in their company bad tricks.

VERMONT STATE AGRICULTURAL SOCIETY, CATTLE SHOW, AND FAIR.

THE first annual State Fair of Vermont was held at Middlebury, on the 10th and 11th of September. Having a pressing invitation from some of the originators of this praiseworthy enterprise, we went to meet them in their mountain home, and participate in the triumphs of their first great annual gathering.

A state society had not been fully organised, but an invitation was extended to all for the exhibition of their stock, without any of the accompaniments of judges or awarding committees, or the incitement of premiums. In the absence of this stimulus and notwithstanding the short notice that was given, there was a promptness in their response to the call, that reflects the highest credit on the farmers of Vermont. To say that the exhibition was worthy of the state, or that it represented even to the most limited extent, her agricultural, mechanical, or industrial interests would be rendering her great injustice. There were but three departments of the show that approached to a fair representation. These were in the sheep, the horses, and the men.

Such a hardy race of unadulterated farmers, we have not seen for many a long day. In fact, there is not one of the eastern or middle states so purely agricultural as Vermont. She has no commerce, and few manufactures; and there is nowhere within her boundaries, that class of idlers, loafers, or *chevaliers d'industrie*, that successful commerce and sudden or inherited wealth beget. Probably no other state in the Union presents a more general equality in the pecuniary and social condition of its citizens, and none where there is practised a more uniform industry and economy. The learned, and even the literary professions, are most worthily represented, but the devotees of these are scarcely withdrawn from the agricultural class, and appear in no respect to feel elevated above them. Her ablest representatives and senators, some of whom we met, seemed to be farmers and farmers only. They were peers among the best of the nation's counsellors at Washington, and they are only peers among their worthy constituents at home.

The Sheep exhibited have never been surpassed; indeed, they have never been equalled in some of their distinctive families, in any show in the United States. The French Merinos, imported by Mr. Taintor, and exhibited by the Messrs. Bingham, about 100 of which were on the ground, exceeded anything America has yet

seen, and they were only equalled by those reserved by Mr. T., in his own sheep fold at Hartford. They appeared to us considerably to exceed the merits of his earliest importations, the result, probably, of his long and favorable acquaintance with their breeders in Europe, which has enabled him to procure the choicest animals from their *reserve*, which he could not for some time procure. This has given him a peculiar and exclusive advantage, which his intelligence and enterprise has not failed to perceive and appropriate. We doubt if the world has ever seen any better animals. Mr. T. looked almost exclusively to quantity and quality of fleece, and hardness of constitution; yet, while eminently successful in these, he has succeeded in securing carcasses, equal in size, and almost as perfect in form, as the Southdown. In addition to those shown by Messrs. Bingham, there were many excellent French Merinos exhibited by Messrs. Jewett, Campbell, Sandford, and Hammond; and some of the latter gentlemen showed a few Prussian sheep of rare excellence, descended from the Infantado and other choice flocks of Spain. The merits of these consisted in comparatively large weight of fleece, on small carcasses. They worthily represent the best specimens of our earliest importations of Merinos, by Messrs. Humphreys, Jarvis, and others. Besides the Merinos, we saw no other sheep—not a single representation of the Saxon, the long or the middle wools.

Horses have long been a staple of Vermont, and at no former period has she equalled the number and excellence of her present stock. But as in sheep, this display was confined to a single class—the *active roadster*. We saw no racers, no heavy draught horses, and no Cleveland bays. Those shown were principally descendants of the famous Morgan horse; and certainly, we have seen no better horses in their class than these. We liked the arrangements for showing these animals, better than any before practised. They were brought upon the show ground and occupied a stand within or outside of the course, at their exhibitor's option; but on the call of the committee, each prominent sire took the lead around the course of half a mile or more in circumference, followed by his progeny. First came Black Hawk, a veteran of 16 years, with a troop of 30 or 40 young stallions, and most of them presenting a striking resemblance to the original. Then followed the White-Mountain Morgan, the Green-Mountain Morgan, the Hambletonian, &c., and their respective gets; and last of all the

geldings and matched horses, of which but few were exhibited. The mares and colts were very numerous and choice, and we believe everybody's mare in Vermont had a colt. One of our correspondents has recently characterised the Morgan horse a humbug. We wish there were more such agricultural humbugs. He has equally failed in characterising this fine family of horse flesh. He has evidently drawn his ideas from the throng of miscellaneous brutes that have been picked up by jockeys of every hue, and palmed off among the unsophisticated wherever such customers could be found. Of course, there is no such thing as a pure Morgan horse, as their origin dates from a single animal, and less than 60 years ago. But they have had about the same period to form a peculiar race as the Ayrshire cattle, and their success is fully equal. They are not homogeneous in form, appearance, nor character; but they are enough so to be entitled to the possession of a distinctive family name. There are wide departures from their general resemblance, in many of the progeny that are bred from uncouth dams. We have seen some over 16 hands high, and some scarcely 12; some with steep rumps, big heads, and dull eyes, or sluggish gaits, that were called Morgans, and probably enough were gotten by them, but the characteristics of the dam were too potent to be subdued by a single cross. In conclusion, we are compelled to say, that the true type of the Morgan horse is as desirable an animal for the road, whether our taste, or convenience, or pockets are concerned, as we have ever seen in harness; and success say we to the Vermont enterprise, of rearing and maintaining a new and highly creditable family of horses.

In Cattle, we found little to commend as compared with the New-York State Show, yet much if compared to some of her sister states. Mr. Sanford, of Orwell, had two beautiful imported Devon cows and a calf, from the celebrated herd of Mr. Turner; and Mr. Gregory, of Northfield, showed a number of Herefords, from Mr. Sotham's importation, and their descendants and crosses. There were some other good Devons, and a few shorthorns, but these were deficient both in number and excellence. Vermont is not the place for shorthorns. It is the Devons and Herefords that are best adapted to her soil and surface, and these she will do well to encourage and propagate. There were few good cows, and fewer still of fat cattle, but a goodly show of steers and working oxen.

Of Swine, there were only a few; but some

Suffolks from the stock of the late Mr. Stickney, possessed rare excellence.

The Poultry was limited to half a dozen coops, and some of these would have answered for the original in the present volume of the *Agriculturist*, page 56, fig. 11.

Of Fruits, Flowers, Vegetables, Grain, the Dairy, and Other Farm Products, there was scarcely anything but a few strings of onions and a mess or two of potatoes.

Almost the only farm implements shown—and there were no others except Fairbank's scales—were from the celebrated manufactory of Messrs. Ruggles, Nourse, Mason & Co., and a few plows from Messrs. Prouty & Mears. No manufactures, except a little leather and iron, a piece or two of sheeting, and perhaps a little besides, from a state that embraces its full share of intelligence, a variety of mineral products and manufactures, bespeaks a want of understanding or interest in their exhibition, which we think another year will remedy. Our observations above must be understood as limited to the first day's exhibition. There were subsequent arrivals for exhibition which may have materially enhanced its merits.

The Address was delivered by Mr. Holbrook, of Brattleboro, on the fair grounds, at 2 P. M., to a large and interested audience, and was said to have been excellent, but we did not have the pleasure of listening to it.

AMERICAN PLOWS IN EUROPE.

MR. JOHNSON, secretary of the New-York State Agricultural Society, thus writes to the *Cultivator*, from London:—"While we were trying the American plows, an English gentleman, living adjoining the land we were plowing, who had seen me as soon as I arrived on the ground, asked the privilege of trying our plows with one horse. He took one to another part of the field, and with one of his big horses, plowed with perfect ease, six inches deep and nine inches wide, without any extra effort of his horse. He gathered around him, as you may well imagine, a large crowd, and the wonder expressed was very amusing. The result of this was, that the gentlemen ordered this plow on the spot, and before I left, gave the names of four others in the neighborhood, who were present, for the plows to be ordered for them. This gentleman said, after he had tried the plow,

I do not mind what the judges may say about the plow, it is the one for me."

Further on, he says: "I became acquainted at our trial of plows with Count de Gourcy, a dis-

tinguished French gentleman, who is one of the most distinguished French agriculturists that I ever met with. He spoke in very high terms of our plows. He had seen three of them in operation in France, which had been sent over by some American gentleman who had purchased Rambouillet sheep; but his name he did not recollect. They were, he said, so light, so simple in their construction, so easily operated by the peasantry of France, and so cheap, that he preferred them altogether, to any other plows. He expressed himself highly gratified with the performances of our plows at the trial—said they had accomplished all that was desired."

The gentleman alluded to above, and of whose name Mr. Johnson was ignorant, is John A. Taintor, Esq., of Hartford, Connecticut; and the plows were of our manufacture. Our agricultural implements have not only been sent to France, but to nearly every other country in Europe, and given great satisfaction. They are especially liked for their simplicity, strength, and cheapness; and the superior ease and facility of accomplishing their work. As a general rule, it does not require more than half the power to propel an American agricultural implement as a European.

SCALDING HOGS.

I SAW an article some time since, in the *Agriculturist*, on scalding hogs with stones; or rather, heating the water with stones instead of in furnaces or pots; and I thought I would send you a description of my proceeding in such work.

I have a scalding, or large wooden tub, with a boiler in it, by which we heat the water by building a fire within the boiler, which saves the trouble of bailing off the water after the tub is filled, or of handling stones either, and a much more convenient way it is.

I will give you a description of it as well as I can without an engraving, which I am unable to give. It is five feet three inches long, two feet wide at top, and twenty inches to the boiler from the top of the tub, the boiler being a long cylinder of copper or sheet iron eleven inches in diameter, reaching from the outside of one end of the tub to nearly the inside of the other end, where it has a shoulder; and the rest is the size of a common stove pipe, reaching through the end of the tub, to put a pipe on for the draft and smoke to pass through. The larger end should be even with the outside of the tub, and have a door, with a flue hole in it, attached to the tub. Some are made wider at the top than at the bottom. Mine is so, being

only sixteen inches at the bottom, and sixteen inches to the bilge, being the same width at the top of the tub. It should have a rack, or something like a ladder, over the boiler to keep the hog from laying upon it, and should have a wooden roller put inside the tub, at the end where the boiler door is level with the top of the tub, to assist in getting out the hog, and have another ladder with rollers, to pull the hogs on, with a couple of hooks on one end to hold it to the tub.

The wood used for fuel need not be more than two feet long. Corn cobs will do to heat the water with, though wood is the best. It can be heated in an hour or two, if the pipe draws well. A tub of this size will scald a hog that will weigh 700 pounds. It should have a lid to it, to make the water heat quick. Mine is made of cedar plank two inches thick, with two planks on each side, and three iron hoops, one on each end, to go all the way round the tub, and one in the middle to lap over the top of each plank.

PETER E. HARVEY.

Columbus, N. J., 1851.

ELEVENTH ANNUAL SHOW AND FAIR OF THE

N. Y. State Agricultural Society.

THE eleventh Annual Fair of the New-York State Agricultural Society, was held in Rochester, on the 16th, 17th, 18th, and 19th days of September. The site was eligibly chosen on the left bank of the Genesee, within two miles of the centre of the city, and nearly opposite the picturesque and tastefully ornamented grounds occupied by the Mount-Hope Cemetery. There was, however, a serious drawback to their comfort, in the absence of all shade, except such as was afforded by tents and temporary structures, devoted to the purposes of the society. If these natural awnings cannot be found at some convenient point, we insist for the suffering thousands that may hereafter congregate at these annual fairs, that temporary seats, with ample awnings, be located in different parts of the grounds, that exhaustion shall not necessarily follow the effort to study the subjects of interest presented for investigation. Another, and much more intolerable nuisance existed, in the suffocating clouds of dust that enveloped for a mile and a half, the only approach to the show grounds. Why this gross neglect is permitted, both by the officers of a society that has received such ample remuneration from the public, and by the citizens of the place, who promised all due provision for the comfort of members

and spectators, we are at a loss to conceive. One thousand dollars would have been well bestowed in saturating the ground; and probably a fifth of this sum would have been ample for this purpose. We would make it a condition to the holding of any subsequent fair, that the approaches to and around the premises, should be free from the annoyance of dust, which, of course, is always to be expected at the season when these exhibitions occur. In other respects, the arrangements were entirely appropriate and liberal. An extensive enclosure, and convenient tents and buildings, afforded ample accommodation for spectators, animals, and products. The citizens of Rochester were kind and hospitable to the last degree. Without this generous hospitality on their part, many a weary stranger would have had to lodge in open barracks, instead of the well-furnished chambers so freely offered.

We cannot, however, bring within this commendation, the ridiculous effort at display, got up by some ambitious, but weakly-minded citizens, under the head of *a festival*. What would any sober-minded, plain farmer deem an appropriate festival for the multitude who were wearied by a ten hours' exposure to the broiling sun, in the suffocating dust we have alluded to, and among beeves, and horses, sheep and poultry, implements and garden truck? Why, clearly, if anything were proffered beyond a comfortable supper, clean linen, and a quiet bed, it would be a general entertainment of plain but substantial fare, with good music and spirit-stirring speeches, such as the occasion would not fail to elicit from the numerous choice spirits that annually congregate there. In such an assemblage, the body might be refreshed, while the senses were gratified and the mind improved by the feast of reason. But, what had we in the place of this common-sense entertainment? Why, a thing called *a festival*, but really, an attempt at a *fashionable ten dollar admission ball*, where white kid gloves, dainty music, the most absurd and costly refreshments, and the primmest kind of ceremony and manners were the distinguishing characteristics. The starch was thickened and the gloom deepened, by some very formal and premeditated speeches, previously committed to paper, and perhaps, read by one leading functionary to another. The description of this lugubrious affair, by an eye witness—for we were much better employed in sleeping off the fatigues of the day—would have been sadly painful had they not been so uncontrollably ludicrous.

One other item we feel bound to notice as it deserves. A large bill for the entertainment of *distinguished invited guests*, was said to have been ignored both by the committee of the society and that of the citizens. We trust the getters up of such invitations will have the good sense to see this matter settled in some other way than by taking the hard earned contributions of the society. Members are willing to pay their money for the legitimate objects of the society; but for such toadyism as is shown in running up scores for many hundreds, not to say thousands of dollars, to pay extortionate hotel bills for exacting guests, is not what they bargain for, or will quietly submit to. The plain cold cut, provided by the society, and taken on the ground, in true farmer style, by the committees and working officers of the society, we decidedly approve of, and heartily commend in all future arrangements.

The success of this fair, so far as is shown by the receipts of money, and the number of spectators, is decidedly in advance of any preceding one. The amount is some \$3,000 larger than ever before taken for members and admission upon the grounds; and the number of entries for exhibition, in many of the departments, far exceeded any before. We will give these in a subsequent number, when accurately ascertained from the society's books.

The Shorthorns were in greater perfection than ever before at the State Fair, or any other fair in the United States. Several of England's very best, and their immediate descendants, were there, and they are now in such hands as we can rely on for fully sustaining, if they do not even improve their valuable points for American farmers.

The Devons have never before been seen in America, in so large numbers, and of such unqualified excellence. Many of these were but lately imported from the choicest herds of Devonshire; and some others, bred from recently-imported stock, hardly fell behind in merit. Three beautiful spayed Devon heifers, of finer forms, and greater size, than we ever before saw. We believe they could hardly be matched, and certainly not surpassed by any steers of the same age, either for the yoke or the shambles. We have neither time nor room now to give the names of animals nor their breeders, but shall publish a list of both in our next.

The Herefords, that really meritorious breed of horned cattle, were principally in the hands of two or three persons. But they fully evinced the excellent points that characterised the impor-

tations made some ten years since. We regret that others have not followed to sustain and extend this valuable breed.

Of Ayrshires, very few were exhibited; of *Allderneys*, three or four; of *Hungarians*, two; and of *Mixed Breeds* and *Natives*, fat cattle and *Dairy Animals*, there were less than we have ever seen on a similar occasion. There were, however, some choice specimens of each, scarcely if any falling below their most successful predecessors.

Some excellent *Sheep*, were on the ground. *The Southdowns* were, perhaps, as a body, better than any equal number before exhibited, there being a large proportion lately imported from the best flocks of Jonas Webb and others. There were many good specimens of the *long-wools*, but these were not shown in large numbers. There were numerous entries of *fine-wool* sheep, either pure or variously compounded of choice Merino and the finer Saxons. We saw, however, but few of the large French Merinos, of which Vermont exhibited so largely at her late State Fair.

Horses were shown in large numbers, greater we believe than ever before, but not of superior merit. We did not have an opportunity of examining them, either generally or minutely; but so far as our observation extended, there was less variety, and certainly not greater excellence, than on several previous occasions. There were many of the cart and other coarse breeds sent by our neighbors in Canada, and some of the finer bloods were also entered by them, each of which possessed considerable merit.

The Swine were not numerous, but most of those shown had good points. They were principally white, and mostly either *Suffolk* or *Leicester*. The former are nice and delicate in the best qualities and proportions of a pig, but the last are altogether too massive and unwieldy for any other purpose than to furnish *side pork* for the navy. We observed but two or three *Berkshires*, and one pen of that prolific, hardy, self sustaining little breed, the *China*, consisting of a dam, and her baker's dozen of young porklings.

The Poultry was not numerous, but some of it very attractive. We wished for a little leaven from the Boston spirit. We like to see the coops well stocked. Taste may be consulted, and profit, too, in these minor matters, equally as in larger.

Farm Implements were, perhaps, never so abundant, nor of better quality, on any previous exhibition. There were, however, but few articles differing materially from those previously shown. We think we may promise our farmers

a good mowing machine for their use another season, there being two on the ground better than any before used. There was a flax-breaking machine, recently invented, which breaks up the straw, when freed from the seed, and cleans out and separates quite perfectly, the shives, or woody portion from the long fibres. This, taken in connexion with the late discovery for altering the texture from the unyielding wiry touch to a soft, cottony mass, is undoubtedly destined, soon to bring the comparatively neglected interest of flax culture to its former elevated position among American products.

The *Fruits, Vegetables, Flowers, Grain, Honey, and Dairy Products* were not numerous, but many of them were of great excellence.

The *Annual Speech*, by Senator Douglas, was a good one; but though adroitly shaped, to give the most effective point to the speaker's peculiar views, without eliciting anything beyond the smallest amount of censure, it was, nevertheless, open to pointed criticism, which we have neither time nor room to make.

THE COTTON CROP.

THE following letter was addressed to the editor of the Mobile Tribune. It is written by a commission merchant of that city; a man in whose sound judgement and accurate estimates, the public have great confidence. If Mr. Henry's opinion proves correct, cotton must rise considerably. We have been of the opinion all along, the past summer, that it had fallen below a justifiable mark, considering the delicacy of the plant, and great precariousness of its crop. But, one extreme begets another:—

I left Mobile in July, and have since been travelling in Alabama, Georgia, and Tennessee, and have been carefully observing and inquiring diligently, respecting their cotton and other crops.

Before proceeding to give my views as to the extent of this cotton crop, (so far, made up by personal observation a good deal,) I will state my estimates for the crops of 1849 and 1850.

On the 31st of Aug. 1849, my estimate	
was a crop of	2,150,100
That crop turned out to be	2,097,000
On the 31st of Aug. last year, my estimate	
was a crop of	2,200,000 to 2,300,000
That crop by yesterday's New York	
statement, will make	2,350,000 to 2,375,000 bales.

Each of these estimates, you will perceive, is

very nearly correct, but the great falling off in the weight of the bales last year or for the crop of 1850, received in 1850, '51, would reduce the number of bales down towards 2,200,000 of equal weights of those of 1849.

By many, it is said nothing can be told as to the extent of the crop at this season of the year, and the above remarks I introduced for their satisfaction.

I return, then, to say, that the cotton crop of 1851 will not exceed 2,100,000 to 2,200,000 bales. It may fall very much below, but it cannot exceed those figures. Before I left Mobile, the reports were favorable, generally, for a full crop, though various complaints were coming in from some quarters. On my route I found portions of some plantations doing well, and other portions nothing. Some crops promise finely, others poorly. As a criterion for Alabama, I will state that plantations which late in July promised a heavy crop, have so completely shed their forms, blooms, and small bolls, that they cannot yield over a two-thirds crop. This relates to plantations where all the lands are fresh and strong. On those of a sandy and light soil the falling off is still greater. On plantations, where, before I left for Georgia, I supposed had 900 pounds to the acre, made beyond casualty, and which were covered with forms and blooms, I find on my return, not only all those blooms and forms have been shed, but many of the bolls that were then showing finely, and a frost on the first of October would do no serious injury to them. There are now no forms or blooms on the cotton, and it is too late for forms to come, for them then to bloom, and for the bloom to mature the bolls. You know forms, or squares, precede the blooms, and from the first appearance of the square, or form, some three weeks must elapse before it becomes the bloom; in two days, the bloom drops and reveals the boll, and in six or seven weeks, this boll, if it holds on, bursts open, and the cotton can be picked. This is the process. Well, all will see it is now too late, inevitably, for the wind to do all this.

Corn crops, in Eastern Alabama, are good, so of wheat, oats, &c. In Georgia, the corn crop is very poor, generally. Cotton on their old lands is very light, and on their fresh and better lands, much poorer than they promised to be a month ago.

Hurriedly as I have been compelled to write this, if it furnishes any information which may be desirable to the public, it is at your service

Geo. G. Henry.

Caunnaugge, Macon Co., Sept. 1, 1851.

Foreign Agricultural News.

By the steamer *Europa*, we are in receipt of our foreign journals up to September 6th.

Cotton had advanced $\frac{1}{8}$ to $\frac{1}{4}$ of a penny. *Provisions, Flour, and Grain* were a little lower.

What Americans Have Done the Past Season at the Crystal Palace and Elsewhere.—The following summing up is from the London correspondent of the *Journal of Commerce* :—

"So you see that the United States are of late looking up. We have carried away the palm in ship building. We have sent them a reaper to reap their grain fields. We have picked their locks which defied the world, and have given them in their stead, one which has hitherto proved unpickable. We have sent them pressing machines surpassing anything they have, and, as we believe, destined to supplant, perhaps, wholly, those now in use. We have sent them one of the great sources of their power, cotton of unapproachable excellence of quality, and we can send it in quantity at least abundant enough. We have sent them, besides, wheat, bacon, and tobacco, of the prime quality—an article of food, the meat biscuit, which will be found indispensable to the success of many great modern enterprises; the utility of which they have not been slow to perceive. We have sent them, too, the Greek slave; and Colt's revolver, the greatest modern improvement in fire arms, and the most efficient of all known small arms. And we might add that we have fairly bored a great hole through the continent for the commerce of the world. I commend to your notice the handsome manner in which the *Times* calls attention to our opening the Nicaragua route:—

"I have called your attention to these matters not in a spirit of boasting, I hope, but as matters of information. We receive now on this side of the water so manly and heartily an acknowledgement of our success, that boasting would on our part be in most especial bad taste."

The Amende Honorable.—It will be recollected in our August number, that we took the *Times*, and sundry other English papers to task, for their ignorant and illiberal comments on the American exhibition at the Crystal Palace, particularly in that department which most concerns us—the agricultural. We thought it very ungentlemanly, to say the least of it, after inviting the whole world to come forward and make a display of its handicraft for England's benefit, to single out the Americans as a butt for ridicule, and captious, narrowminded, vulgar sneers. Yet, the moment our reapers, plows, &c., are tried, and found to be so much superior to what was anticipated, their tone changes, and the English press acknowledges its error in an honorable manner, and accords to America all, and perhaps even more than is justly her due.

The following is from the London *Times* :—

"Taking all things together, British and Americans have run a pretty fair tie through the trials of this

wonderful season. The spring, it must be confessed, opened ill for Brother Jonathan, and for a good while in the race, we kept well ahead. We had our great Exhibition—a real new 'smart' speculation, which did not turn out a failure, which exceeded everybody's hopes, and which brought about no revolutions at all. It was calculated that we should realise \$2,000,000, whereas we have got over \$2,100,000 at this very moment, with six good weeks before us still. On the other hand, it is beyond all denial that every practical success of the season belongs to the Americans. Their consignments showed poorly at first, but came out well upon trial. The reaping machine has carried conviction to the hearts of the British agriculturist. Their revolvers threaten to revolutionise military tactics as completely as the original discovery of gunpowder. Their yacht takes a class to itself. Of all the victories ever won, none has been so transcendent as that of the New-York schooner *America*. The accounts given of her performances suggests the inapproachable excellence attributed to Jupiter by the ancient poets, who describe the king of the gods as being not only supreme, but having none other next to him. 'What's first?—'the America.' 'What's second?—'Nothing.' Besides this, the *Baltic*, one of Collin's line of steamers, has 'made the fastest passage yet known across the Atlantic;' and, according to the American journals, has 'been purchased by British agents 'for the purpose of towing the Cunard vessels from one shore of the ocean to the other.' Finally, as if to crown the triumphs of the year, Americans have actually sailed through the isthmus connecting the two continents of the New World; and, while Englishmen have been douting and grudging, Yankees have stepped in and won the day.

"So we think, on the whole, that we may afford to shake hands and exchange congratulations, after which we must learn as much from each other as we can. As for yachts, we have no doubt that by next August every vessel of the Cowes squadron will be trimmed to the very image of the *America*; there is no doubt that our farmers will reap by machinery, and the revolver, we fear, is too attractive an embodiment of personal power to be overlooked by European mischief-makers."

Birds—How Can I Learn to Tame Them?—This is not so difficult as you imagine; nor is it fair to lay claim to any particular "art" in the matter—successful though we have been in nearly every effort made. The "law of kindness" is the talisman by which these things are effected; a law which, if it were brought into more general practice amongst ourselves, would make society at large infinitely better than it is. The spell can be worked at any time by the magic rod of "affection." If this be properly handled, we must all fall before it. Such is the extent of power. Remember, however, to use that power for good only, and never dare attempt to commit any breach of confidence. Your birds will then be tame, and will love you.—*Gardeners' Chronicle*.

Editors' Table.

TO OUR READERS.—It will be seen by reference to the first page of this number of our paper, that the *Agriculturist* is to cease at the end of the present volume. A similar publication, to be called *THE PLOW*, will take its place, edited by our assistant and veteran correspondent, Mr. Solon Robinson. The sole reason of our retiring from the arduous duties of editors is, that the business of our agricultural warehouse and manufactory demands our exclusive attention. But in ceasing to be editors, it is not our intention to relinquish intercourse with the agricultural public; on the contrary, we shall expect to be regular contributors to the *Plow*, and thus through its columns, keep up that communication with our friends and the public, which has been so agreeable to us for the past ten years.

If circumstances favor, it is our intention to resuscitate the *American Agriculturist* at some future day, in an enlarged and highly improved form, to be conducted on the plan of the ablest European periodicals.

We recommend the *Plow* to all the friends and subscribers of the *Agriculturist*; and as Mr. Robinson will give his whole time and talents to it, we have no doubt, with the assistance of a good corps of correspondents, he will make it one of the best and most useful agricultural papers in the United States. Although published at half the price of the *Agriculturist*, it will be of the same size, and contain the same number of pages, thus making it the cheapest publication in America. Mr. Robinson's great desire is, to benefit and instruct the millions; it is for this reason he has put the price of his periodical so low, that no one can object to it on that score. We hope his success in this publication will equal his deserts. If so, his subscription list will be reckoned by tens of thousands. We can assure the farmers of this country the more they read his paper, and practise its precepts, the richer, wiser, and happier they will become.

PRICE OF *THE PLOW*.—Fifty cents a year for single subscribers. A discount of 25 per cent. to clubs of eight or more, which will bring it to the extreme low price of 37½ cents for a year. Correspondents for *The Plow* will be furnished the paper *gratis*.

TO ADVERTISERS.—Mr. Saxton will issue you 30,000 copies of the January number of the *Plow*; it will therefore be a great consideration to advertise in it. An equally large number for the next months will probably follow.

IMPORTATION OF DEVON CATTLE.—Mr. W. R. Sandford, of Orwell, Vt., has recently imported two Devon cows and a young bull calf, from the celebrated herd of Mr. George Turner, of England. They are fine animals, and will do credit to the improved stock of Vermont.

A NEW AND SPLENDID EDITION OF OUR CATALOGUE OF AGRICULTURAL IMPLEMENTS has been recently issued, which the construction of the Post-Master Gen-

eral on the recent postage law, prohibits our sending through the mail without prepayment of postage. Those of our friends or correspondents who wish our catalogue sent through the mail hereafter, will please to enclose the postage for it, (six cents,) in letter stamps, as we fully sustain our share of the expense in its publication. We shall be happy to send it gratis, on request, through any private hands.

TIMES OF HOLDING ANNUAL SHOWS AND FAIRS.—The following indicate the times and places the annual shows and fairs of several State and County Agricultural Societies are to be held in various parts of the United States:—

Fair of the American Institute of New York.—

October 1st, the fair at Castle Garden will be open to visitors at 8 A. M.

October 6th. Special exhibition of dahlias and roses at Castle Garden.

October 7th. Testing of plows at White Plains. Committee will be on the ground at 10, A. M.

October 8th. Plowing and Spading Match at White Plains, in connection with the Westchester-County Agricultural Society. Committee will be on the ground at 10, A. M.

October 15th, 16th, and 17th. Cattle Show at Madison Cottage, corner of Fifth avenue and Twenty-third street. Entries may be made on the 13th, 14th, and 15th, on the ground, or at any time previous, by addressing A. Chandler, Corresponding Secretary, 351 Broadway.

October 16th. Anniversary address, in the evening, by Dr. Charles T. Jackson, of Boston, Massachusetts. Tickets gratis. To be had at the garden, or from any of the managers. Due notice of the hour and place will be published.

Pennsylvania State Agricultural Society, at Harrisburgh, October 29th, 30th, and 31st.

Georgia State Agricultural Society, at Macon, October 29th, 30th, and 31st.

Chenango-County (N. Y.) Agricultural Society, at Norwich, October 1st and 2d.

Westchester-County (N. Y.) Agricultural Society, at White Plains, October 7th, in connection with the Plowing Match of the American Institute.

Burlington-County (N. J.) Agricultural Society, at Mount Holly, October 8th.

Philadelphia-County (Pa.) Agricultural Society, at Philadelphia, October 8th and 9th.

Clermont-County (Ohio) Agricultural Society, October 2d, 3d, and 4th.

Fairfield-County (Conn.) Agricultural Society, at Bridgeport, October 8th, 9th, and 10th.

In addition to the usual premiums for Plowing, P. T. Barnum, Esq., President of the society, with great liberality, offers additional premiums, amounting to \$200, the highest of which is \$50, open to plows and teams from every state in the Union. This will be a capital opportunity for the plow makers of the United States to show their hands.

NEW-YORK CATTLE MARKET.

At Market.—1,800 Beeves, (southern and western,) 120 Cows and Calves, and 7,800 Sheep and Lambs.

Beef Cattle.—Prices do not vary materially from our last. Good qualities sold from \$6 to \$7.50 per hundred pounds. About 100 unsold.

Cows and Calves.—Prices from \$20 to \$40. Unsold, 10.

Sheep and Lambs.—Sales of Sheep at from \$1.50 to \$5. Lambs at from \$1.25 to \$4. 150 unsold. sept. 15

ACKNOWLEDGMENT.—A sample of Flax Cotton, prepared by Mr. Claussen's process, from E. G. Roberts, 68 Pine street, N. Y., patentee for the United States.

THE AMERICAN MUCK BOOK, treating of the Nature, Properties, Sources, History, and Operations of all the Principal Fertilisers and Manures in Common Use, with Specific Directions for their Preservation and Application to the Soil and to Crops; drawn from Authentic Sources, Actual Experience, and Personal Observations, as combined with the Leading Principles of Practical and Scientific Agriculture. By D. J. Browne. Price \$1.

an C. M. SAXTON, Agricultural Book Publisher, 152 Fulton st., N. Y.

PRINCE'S LINNEAN BOTANIC GARDEN and Nurseries.—Wm. R. Prince & Co., Flushing, Long Island, offer their select and unrivalled collection of fruit and ornamental trees, shrubbery, roots, bulbous and other flowering plants, peonies, and greenhouse plants. The stock of standard and dwarf pears, and of all other fruit trees, is very extensive. 100,000 evergreen trees comprising every variety. 25,000 roses of the finest perpetual, daily and moss varieties. 100 splendid varieties of peonies, all the new and superior strawberries. 10,000 grape vines of the finest kinds. Descriptive catalogues with reduced prices will be sent to post-paid applicants. s2t

EAGLE PLOW.—No. 28.—The following extract from the letter of a gentleman who purchased one of these plows, fully explains its character. "In answer to your inquiry how I like the great breaking plow, I have to say it entirely exceeds my expectations, and even your own recommendation, which I then thought quite extravagant. I put on four stout yoke of oxen, and drove into the thickest patch of scrub oak roots upon my farm; not without some misgivings, that I should break the plow instead of the roots; but I have now turned over twenty acres as completely as though it had been nothing but stubble, and the plow is this day better than it was when it came from your store. I think it the cheapest and best plow for such heavy work ever invented."

These plows are for sale at our Agricultural Warehouse, No's. 189 and 191 Water st., New York. Price, plain, \$18—full rigged, with wheel, draft rod, and cutter, \$20.

A. B. ALLEN & Co.

GREENHOUSE PLANTS, VINES AND Roses. Parsons & Co. offer for sale every desirable variety of Greenhouse Plants, and many valuable novelties recently introduced from Europe. Attention is particularly directed to their fine stock of Camellia wilderii, the perfection of whose form is not attained by any other variety. The original stock, both of this and C. Abbey Wilder, is in their possession.

Growers of Grapes are invited to examine their Vineries, now in full fruit, and from which they can furnish good vines of about forty varieties, at

59 cents for those one year old.

75 " " two years old.

\$1.00 " " of extra size.

Their stock of saleable roses includes some thousands on their own roots of the Remoutant, Bourbon, China and Garden Roses, in their various sub-classes. Catalogues furnished gratis on application to Flushing, near N. Y. PARSONS & Co.

DRAIN TILES.—The Staten-Island Drainage Tile Company are now prepared to supply agriculturists with the above-named tiles of the most approved patterns.

2-inch round pipes, one foot in length, per thousand, \$ 9

2½ Do. Do. Do. 10

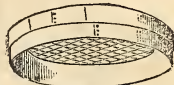
3 Do. Do. Do. 12

and pipe and horse-shoe tiles of all sizes, at corresponding prices.

The establishment is at Latourette's Point, Fresh Hills, near Richmond, Staten Island, and boats drawing four feet of water can enter the yard, and load from the kilns. Address

nyf A. B. ALLEN & Co. 189 and 191 Water st., N. Y.

COMMERCIAL GARDEN AND NURSERY of Parsons & Co., Flushing, near New York. The proprietors of this establishment offer for sale their usual assortment of Fruit and Ornamental Trees, Shrubs, Vines, Roses, &c. Their stock of Apples and Pears is finer than any they have before offered. Also, Pears on Quince, of their own growing. The Ornamental Department contains the usual well-known varieties and all the best new Trees and Shrubs for Lawns and Arboretums, including the new Pines, Araucaria imbricate, and Cryptomeria japonica, with Cedar of Lebanon, at one to two dollars each, and Cedrus deodara of various sizes, at one dollar per foot. Catalogues furnished gratis on application by mail. o



RATS! RATS!! RATS!!!—E. Oliver's Patent Self-Setting Revolving Rat Trap is decidedly the best rat catcher in the United States. It has and will deceive the most cunning old rats that have been too wide awake for all other traps. The sagacity of the vermin will be of no avail with this ingenious trap. Manufactured at 25 Fulton street, up stairs, corner of Water street, N. Y.

P. S. Also, wove wire, for grain, seeds, and ore screens, sieves, riddles, &c. o

FOR SALE.—One of the best grazing Farms in Chautauque county, for sale at \$18 an acre. It contains about 220 acres, about 120 of which are under a good state of cultivation. The buildings and fences are good, and there is on it a good orchard of grafted fruit. A part of the purchase money can remain under a bond and mortgage for a term of years, if desired. The title is perfect. For information inquire of

JOHN D. PATTERSON,
Westfield, Chautauque Co., N. Y.

CRANBERRY VINES.—For sale, 100,000 fine Cranberry plants, which can be forwarded to any part of the Union. Fall is the most suitable time to plant them, south of New York.

F. TROWBRIDGE, New Haven, Ct.

SOUTHDOWN BUCKS FOR SALE.—The subscriber offers for sale ten very fine thorough-bred Southdown bucks, eight months old, and directly descended from the most pure and best stock now in the country. They can be seen on the farm of George Hartshorne, three miles from Rahway, Essex county, New Jersey, or inquire of G. HARTSHORNE.

WINDLESS-CHAIN PUMPS, OR WATER Elevators.—These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.

A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults of privies, where the contents are in a semi-liquid state.

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THE THOROUGH-BRED SHORTHORN Bull Tempest (four years old).—This splendid animal received the first premium of the Rhode-Island Society for the Encouragement of Domestic Industry, at the show of 1850. He was got by "Melrose," (No. 103 Allen's Am. Herd Book,) out of "Daisy," (registered on page 167 of Herd Book,) and as may be seen by a reference, is descended from the famous "Comet," (No. 155 Coates' English Herd Book) who was sold for \$5,000, and resold for \$7,500. He comes on both sides from the best milking stock of England. Price \$100. Apply to

Wm. S. KING, P. M., Mantion, R. I.

MEDITERRANEAN WHEAT, direct from Italy.—As the wheat under the above name, which was imported several years since, has somewhat changed its character under American cultivation, and has become somewhat subject to the attack of the fly and other casualties, it has been proposed to us by several wheat growers to make an importation the ensuing season, direct from Italy. We will receive subscriptions for this purpose up to the first of next May, and if a sufficient sum is then made up, we will make the importation. Each party shall pay prorata the price per bushel it costs laid down in this city, with an additional charge of ten per cent. for our trouble in making the importation. Papers friendly to the above object will please copy this proposition.

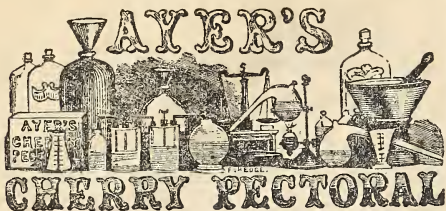
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SUPERIOR SEED WHEAT.—A large assortment of the best varieties of improved seed wheat, among which are the Golden Australian, China or Troye, White-Flint, Hutchinson's Improved, Soule and Mediterranean.

Turnip Seed.—The Early Flat Dutch or Spring, Early Red-top Flat Strap-leaved Red-top Flat, Strap-leaved, White Flat, Early Garden Stone, Large English Norfolk, Pomeranian, White Globe, Large Flat, Long White or Cow Horn, Long Tankard or Hanover, Yellow Stone or Orange, Yellow Aberdeen or Bullock, Long Yellow French, Dale's Hybrid.

Seed Rye of the best winter variety; also, a cheaper kind, suitable for late fall and early spring pastures.

A. B. ALLEN & CO., 189 and 191 Water st., N. Y.



**AYER'S
CHERRY PECTORAL**
For the Cure of
COUGHS, COLDS, HOARSENESS, BRONCHITIS, CROUP, ASTHMA, WHOOPING COUGH AND CONSUMPTION.

This remedy is offered to the community with the confidence we feel in an article which seldom fails to realise the happiest effects that can be desired. So wide is the field of its usefulness and so numerous the cases of its cures, that almost every section of the country abounds in persons, publicly known, who have been restored from alarming and even desperate diseases of the lungs by its use. No family should be without it, and those who have used it, never will.

Read the opinion of the following gentlemen, who will be recognised in the various sections of country where they are located—each and all as merchants of the first class and of the highest character—as the oldest and most extensive wholesale dealers in medicine with an experience unlimited on the subject of which they speak. If there is any value in the judgment of experience, see

THIS CERTIFICATE.

We, the undersigned, wholesale druggists, having been long acquainted with Ayer's Cherry Pectoral, hereby certify our belief that it is the best and most effectual remedy for pulmonary complaints ever offered to the American people. And we would, from our knowledge of its composition, and extensive usefulness, cordially commend it to the afflicted as worthy their best confidence, and with the firm conviction that it will do for their relief all that medicine can do.

Henshaw, Edmonds & Co., Boston, Mass.; Reese & Coulson, Baltimore, Maryland; Ladd & Ingraham, Bangor, Maine; Haviland, Harrall & Co., Charleston, S. C.; Jacob S. Farrand, Detroit, Mich.; T. H. McAllister, Louisville, Ken.; Francis & Walton, St. Louis, Mo.; Joseph Tucker, Mobile, Ala.; Theodore A. Peck, Burlington, Vt.; Haviland, Risley & Co., Augusta, Ga.; Isaac D. James, Trenton, N. J.; J. M. Townsend, Pittsburg, Penn.; Clark & Co., Chicago, Ill.; E. E. Gay, Burlington, Iowa; M. A. Santos & Son, Norfolk, Va.; Edward Bringham, Wilmington, Del.; John Gilbert & Co., Philadelphia, Pa.; Z. D. & W. H. Gilman, Washington, D. C.; J. Wright & Co., New Orleans, La.; Chas. Dyer, Jr., Providence, R. I.; Jos. M. Turner, Savannah, Ga.; Wade, Eckstein & Co., Cincinnati, Ohio.

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J. G. Coffin & Co., Valparaiso, Chili; F. M. Dimond & Co., Vera Cruz, Mexico; Fred. Rivas & Co., Bogota, New Granada; S. Provost & Co., Lima, Peru; Morton & Co., Halifax, Nova Scotia.

With such assurance, from such men, no stronger proof can be adduced, except that found in its effects upon trial.

Prepared and sold by JAMES C. AYER, Practical Chemist, Lowell, Mass., and by druggists generally. sept. 3t

PATENT ZINC PAINTS.—The Zinc White Paint is rapidly superseding white lead, over which it possesses many advantages. It is whiter and more beautiful than white lead—does not turn yellow, even when exposed to sulphurous vapor, has no smell, is not injurious to health, and is really cheaper, as it covers more surface and is more durable. This superior zinc paint is kept constantly on hand, both dry and ground in oil.

ZINC BROWN AND BLACK PAINTS are both weather and fire proof—the best covering for outside work ever introduced; adapted to buildings of wood, brick, or stone; fences, carriage bodies, bridges, and machinery; the hulls of vessels, anchors, chains, and all other iron work on board ship; Steam boilers, smoke stacks, and water tanks; iron, tin, and other roofing, iron shutters, doors, and railings, wire fences, &c. For iron surfaces, this paint is especially valuable, as it forms a galvanic connection, and entirely prevents rust. May be had both dry and ground in oil.

In preparing these paints for use, when dry, they should not only be slightly mingled with oil, but thoroughly worked in with as little of it as may be necessary to give the proper fluidity, when they will cover well and give entire satisfaction. When ground in oil, they are treated in all respects like white lead.

Dealers supplied by S. T. Jones & Co., general agents for the New-Jersey Exploring and Mining Co.'s Patent Zinc Paints, No. 53 Beaver street, New York. ju 6m

THE NEW-ENGLAND

Live-Stock Insurance Company,

New Haven Conn.,

CAPITAL \$50,000,

With power to increase to \$100,000.

insures horses, cattle, &c., against loss from death, either from natural causes, or accident, or from disease of any description.

THOMAS KENDRICK, President.

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New-York agency, corner of Wall and Hanover streets, Merchants' Exchange. ju ly

VALUABLE FARM FOR SALE, in the town of Conchin, Broome county, State of New York, containing 300 acres, with a large brick house, barn, hay houses, carriage houses, wood house, and other necessary buildings, elegantly situated, fronting the New-York and Erie Railroad and Cocheton Turnpike, and Susquehanna River, three miles from the Great Bend Depot, two miles from Kirkwood Depot, and eight miles from Binghamton, well proportioned for wood, meadow, and grain land. An orchard, with grafted fruit, well watered, and is one of the best farms in the town of Conchin. For further particulars apply to

JOSEPH CONCHIN, near the premises, or
EDWARD WAIT, Montgomery, Orange Co., N. Y., or
MILTON McEWEN, Warwick, Orange Co., N. Y.

FRUIT AND ORNAMENTAL TREES FOR SALE.—50,000 Peach trees of one and two years growth, from the bud; 40,000 Apples; 5,000 Cherries; 5,000 Dwarf Pears, each containing all the most esteemed varieties, and of large size. Also Quinces, Plums, Nectarines, Apricots, Almonds, Grapes, Raspberries, Gooseberries, Currants, Strawberries, &c., &c. 50,000 Silver and Ash-leaved Maple Seedlings of one year's growth; 50,000 Apple Seedlings. The above will be sold on the most reasonable terms. Persons residing at the south and west should send their orders early, so that the trees may be forwarded by the last of October or first of November. Catalogues with prices annexed will be sent to all applicants. au 3t

ISAAC PULLEN,
Hightstown, Mercer Co., New Jersey.

NEW BREED OF DUCKS.—The subscriber has for sale a few pair of a cross between the black Botany Bay and the white Aylesbury breeds. They are jet black with white or mottled necks and breasts, and seem to partake of the disposition of the Aylesbury to live on grass, and to thrive without water. Price, \$5 per pair delivered boxed, on board of any vessel or conveyance in New York. sept 3t

S. B. PARSONS, Flushing, near N. Y.

VALUABLE REAL ESTATE FOR SALE. I offer for sale my entire real estate, upon which are 35 sets of boxes; the most of which have only been in use from one to two years; with a sufficient quantity of round trees to cut at least 20 sets more; the land upon which these are situated, is not easily surpassed by any piney lands in Eastern Carolina. There is upon the premises two distilleries neatly and conveniently fitted up, with all necessary outhouses. Upon the farm, I think the buildings altogether are seldom excelled. Those wishing to purchase are invited to examine for themselves. Terms shall be low, and payments accommodating. Come and see. Any person wishing to purchase can be furnished with a sufficient number of teams and wagons to carry on both the operations of farm and turpentine, and with a year's supply of provisions. mar tf

JOHN A. AVIRETT, Catharine Lake, Onslow Co., N. C.

NEW-OXFORDSHIRE BUCKS FOR SALE. The subscriber has a number of yearlings and two-year-old bucks which he will sell any time when called for, and has no hesitation in saying this breed of sheep is superior to all others for large carcass, heavy fleeces, early maturity, and constitution, and defies competition with all other breeds for profit. This flock, (which has been bred from some of the best ever imported,) is so well known they need no further description than to say that the sire clipped 18 pounds of washed wool, and weighed 361 pounds alive. Gentlemen are invited to call and see for themselves, or communicate by mail. Direct to
CLAYTON B. REYBOLD, Delaware City, Del. ju 5t

A. G. BAGLEY & Co., manufacturers of gold pens, gold and silver pen and pencil cases, ivory and tortoise-shell holders, and patentees of the celebrated extension cases, No. 189 Broadway, New York. ju tf

1000 Men Wanted to Circulate the following Useful

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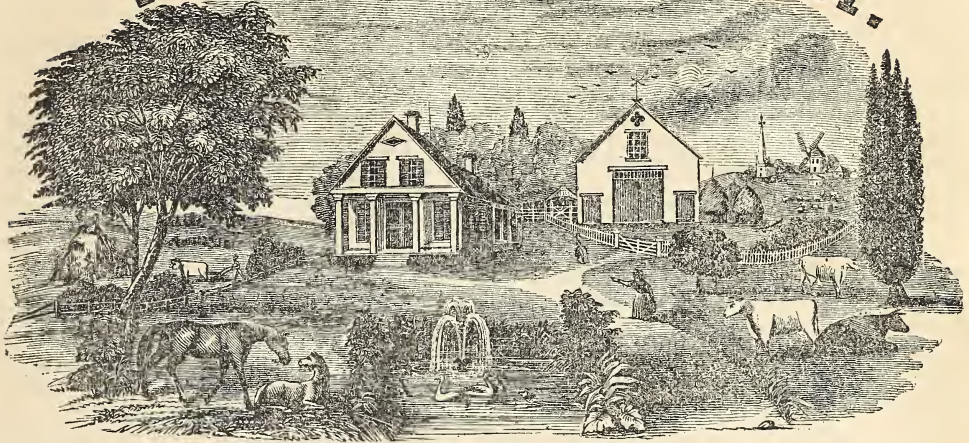
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A. B. ALLEN and R. L. ALLEN, late Editors of the American Agriculturist, will be regular contributors to the Plow; also, Professor Norton, Dr. Antisel, L. F. Allen, and others, late correspondents of the Agriculturist.

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REMINISCENCES OF CALIFORNIA.—No. 2.

UNDER so intense an excitement as California has been suffering for the last three years, and from which she has just commenced recovering, everything like agriculture, (until quite recently,) was abolished, and the spade and pickaxe of the miner substituted; and in order to come at any correct estimate of the agricultural capabilities of that country, we must look at it as it was before the discovery of gold, and at the few more recent attempts in the same branch of enterprise.

Watered, as the country is, by so many beautiful running streams, and having so mild and short winters, it will be seen at once, that it is well adapted to grazing, and that its many fertile river bottoms, or prairie meadows, must furnish splendid pasturage for immense herds of cattle and horses. Indeed, for this purpose, it cannot be surpassed, if equaled, by any country on the Atlantic side of the continent. The soil is various; being, on the mountains and high hills, very rocky and sterile, but in the valleys, extremely rich and fertile. It is estimated by some, that the lands of two-thirds of the state are fit for cultivation; but, from my own observation, I should think this to be an over estimate—perhaps the agricultural and pasturable lands together might make up this proportion—the rest is of extreme barrenness and sterility, little else than barren rocks.

The climate and soil are particularly adapted to the growing of small grains, such as wheat, rye, oats, buckwheat, &c. Corn does not thrive so well here as in the countries bordering on the Atlantic, owing to coolness of the night. I have never passed a night in the country during a two years' residence, when I was uncomfortably warm with a blanket rolled snugly around me. Fruits, such as the apple, pear, peach, grape, cherry, orange, dates, figs, melons, &c., can be raised here successfully.

Many of the grains grow here spontaneously, and it is not uncommon to see plains containing hundreds of acres, covered with the wild oats of the country, (not having quite so heavy a grain as our cultivated varieties,) sometimes to the astonishing height of ten, twelve, or even fifteen feet, with a stalk over half an inch in diameter—usually, however, about four feet high, with a proportionate-sized stalk. Many of the small plains and hill-sides are covered with a red and white clover, peculiar to the country, which, owing to the dry weather, forms, in the latter part of summer, a very nutritious kind of hay, much sought after by the various herds of ani-

mals. Flax, very similar to that grown in the Atlantic States, is also found among the natural productions.

The variety of wheat sown here, is that termed the "wheat of Taos," having three or four distinct heads. The average crop is about 40 bushels to the acre. It is generally grown without irrigation, being sown during the months of November and December, and harvested in the succeeding May or June. Tobacco is grown in the southern section with much success, and is said to yield as plentifully as in Cuba.

Among the berries, strawberries and "Mansinitas," (Spanish, meaning little apples, being a berry,) are, perhaps, the most abundant, although blackberries, currants, &c., are found in some localities. It needs only that the gold mania should subside, for California to fall back upon her natural resources, to bring her out in her true colors, and with an enterprising population to have her stand forth in bold relief upon the western shores of America.

In manufactures, California has never done anything, if we except a few saw-mills, and one or two small mills for grinding and flouring wheat; but when attention shall be turned to this subject, it must be a very prominent enterprise of the country. Nearly all of the tributaries of the Sacramento and San Joaquin Rivers, on the eastern slope of the great valley, head in the Sierra-Nevada Mountains, and furnish any quantity of water power desirable. Every article, (timber and stone,) necessary to construct good and substantial dams across these streams, is obtainable upon the very banks. Situated as is the country, upon the same ocean that washes the eastern shores of the other continent, and the East Indies, the market for most articles of manufacture must always be good and durable, and there is nothing in the perspective to prevent California from becoming, not only an agricultural, but also a manufacturing state.

Notwithstanding, however, what may be the facilities for commerce, agriculture, or for manufactures, possessed by California, it will yet be a long time before she will, or can, recover from the effects of the late golden discovery in her territory. It has commenced, already, to throw off this unnatural excitement, and many are leaving the mines and turning their attention to the different pursuits or callings which they followed at home. Still, as the victim of the intoxicating draught has been raised above an equilibrium, and, as of necessity, must fall

as much below it, to restore the equipoise, so must it be with California, and it will take some time to accomplish this. L. T. TALBOT.

COUNTRY HOUSES ON THE HUDSON RIVER.

WITHIN the past twelve years, the number of country houses for gentlemen, on the banks of the Hudson River have greatly increased, and the style of them has undergone an entire change. Formerly, there were very few, and most of them were in the Grecian portico style, with tall, two-story pillars in front, than which nothing is more ugly and absurd, in our estimation, for an American country house, and only to be tolerated in a large hotel. Now, handsome piazzas, supported by one-story pillars, surround three, and often four sides of an otherwise plain, though elegantly-built house, making it no less comfortable for hot weather than cold. In the summer it woos the breeze and affords a grateful shade; in the winter it forms a dry and delightful promenade, especially for ladies. Then we have the chaste Italian, with its sheltered porch, airy balconies, shady verandas, cool, projecting roof, and lofty campanile or tower; the castellated Gothic, with its frowning turrets, donjon keep, and portcullis; the cottage *ornè*, of great variety of style, picturesque chimneys, bracketed roof, bow windows, *port cochère*, verandas and piazzas, all surrounded with ornamented grounds, lending a variety and finished beauty to the landscape, of which before it was nearly destitute.

Of the country houses recently erected on the Hudson, the most magnificent which we have visited, is that of Edwin Bartlett, Esq., a wealthy retired merchant of this city. It stands on the east bank of the river, about two miles above Tarrytown, on a commanding situation, and is built entirely of massive, dark-grey stone, found in the immediate neighborhood. It is 120 feet in length, and of a corresponding width, with lofty turrets, a high tower, and noble *port cochère*. The style is unique, for the United States, being a mixed old English, harmonising admirably with the bold, picturesque scenery around. But we hold in reserve a full description of this house and its beautiful grounds—just blocked out—together with the classic dell of Sleepy Hollow; where, according to the veracious sketches of the renowned Geoffrey Crayon, on dark, gusty nights, strides the terrific headless horseman, dread punisher of love-presuming pedagogues. We only wish to speak of one thing now about this mansion, which, on inspecting it, highly gratified us; and that is,

while Mr. B. has provided amply, and even luxuriantly for his own family and guests, he has not forgotten the comfort of his domestics. Their rooms for cooking, washing, &c., and chambers are large, and well ventilated, and abound with every convenience—even baths are provided in the latter, to ensure greater comfort, health, and neatness.

Mrs. Bartlett took no little pride in showing us her noble cows; and we dare say, when the pleasure grounds are duly planted, flowers, shrubbery, and trees will not alone be their ornament; but that groups of improved animals will be found gamboling there, adding life and animation to the scenery around. It is in this particular, that the ornamental grounds of English gentlemen greatly excel those of other nations, and are so much the more admired. To our eye, a noble park or pleasure grounds are in a measure desolate without domestic animals of some kind, grazing upon them.

THE MAGUEY OF MEXICO.

UNDER this name, two plants are known in Mexico, the one being the far-famed *Agave americana*, or century aloe, and the other a species of the genus aloe itself, the distinctive characteristics of which I shall soon be prepared to delineate. These two plants have hitherto been confused by most writers, arising, probably, from the fact that both are simultaneously called maguey by the Mexicans. Nevertheless, their characteristics are quite different in several points, and they can be readily distinguished by any observer. The agave flourishes in the coldest districts of Mexico, but the aloe requires the *Terras Calientes* or warmest regions of that country for its full development. The pulque, a well known common drink of the natives, is made from the agave only; but the mescal, a spirituous liquor as strong and as excitant as brandy, and produced by distillation, is obtained from both the species indiscriminately, and they are consequently often grown intermingled in the same field. The leaves are seven to eight feet long, and the plants are ranged in immense fields at six to seven feet asunder. We everywhere found these two plants in extensive use among the native Indians and mestizoes. Strangers to Mexico have but little knowledge of the extent to which the culture of the maguey is carried in that country. There are thousands of acres devoted to its culture, for the purpose of distillation principally, and for the fabrication of cordage of all sizes, suited to the wants of the country. Even

fine shoe thread and fishing lines are made from the leaves, and coarse paper is also manufactured from them. The pulque is only made in the higher and cooler regions of Mexico, the hot regions not being so favorable; but the mescal is distilled throughout every part of that country. I noticed many low mountains which were planted to their summits with the two species of maguey and others where it seemed that they were growing spontaneously, or with little or no culture. They are also planted along the roads as hedges, and very generally, as division fences to the fields, for which purpose they are perfectly appropriate.

Both the aloe and agave arrive at maturity for distillation in five to seven years, and the fields are then cut up and renewed by resetting them with the numerous young offsets which have sprung up around the plants. There is no kind of culture in that country which is so greatly remunerative as the plantations of these species; and they would be highly important acquisitions to our most southern states, and would serve to divert profitably a portion of the great excess of labor now devoted to the culture of cotton, one third of which is absolutely lost to our southern planters by the redundancy of the present cotton crops, beyond the actual wants of the world, and the consequent depreciation in price forced upon their staple, by the speculating manufacturers and bankers of Great Britain.

The maguey may be successfully cultivated in Louisiana, Mississippi, Arkansas, Texas, Alabama, Florida, New Mexico, and part of California.

I will here make a passing remark, although its purport is not new to most of your readers, which is, that the Century Aloe, or Agave Americana, which was so named from the erroneous supposition that it blooms but once in a century, produces its blossoms during the fifth or sixth year of its growth. The flower stems are 27 to 30 feet in height, crowned with an immense panicle of straw-colored flowers, and present a grand and unrivalled display. I have on repeated occasions counted over fifty of these splendid plants in full bloom in a single field, there being often from 25 to 30 acres of them within view.

The Agave Americana is much cultivated in Yucatan, and from its leaves is manufactured the well known Sisal Hemp. This species was introduced to the southern part of Florida some years since, by Mr. Perrine, but has not been subjected to extensive culture there. I have

taken some pains to procure seeds, and have them growing successfully in my grounds.

WM. R. PRINCE.

Flushing, L. I., Sept., 1851.

FARMING IN MISSOURI.

Growing Sweet Corn.—We extract the following from a business letter of an agricultural friend of ours in Missouri:

"I have to thank you for the corn which you sent me last spring. I planted it in due time, and made by far the finest crop of sweet corn I have ever seen, and I much doubt whether it has ever been excelled. Many ears grew to from six to eight or nine inches long, and were very large. I preserved a large quantity of it for winter use, and have saved a great deal for seed. I shall soil with it. I was not quite so fortunate with the Tuscarora corn. The ground upon which I planted it is very level, and it suffered not only in consequence of the tremendous rains which fell, but also for want of work. The ground was too wet throughout the season. Its yield was immense, but much of the first planting rotted. How is it? I raised many ears, full three times as large as any you sent me. I supposed it to be a small corn. I have put up a magnificent parcel for seed, and have several bushels left, of which I shall make bread. You would be amused to hear me brag about it.

Dutton Corn.—The same hand writes of this variety:—In relation to this Dutton corn, I got a friend to bring me three ears. I planted it about the 20th of April, in drills, the rows about three feet apart. It was about fifteen inches apart in the drill, two to three plants in a place. It commenced tasseling at from eighteen inches to two feet in height. Some grew taller before tasseling. I was discouraged, and paid little attention to it afterwards. The wire-worm was very destructive among it too. I went into it about the middle of August, and was surprised to find that it had matured, and that a great deal had rotted, being covered with weeds and grass, and the weather having been excessively wet and hot. It is a beautiful corn. There were many stalks not more than six feet high, that had two good ears; I found some over a foot long. It was ready for cutting up, by the first of August.

How does this compare with what it does with you? The grains are full and plump, and closely set upon the cob. Its average length on plants which escaped the ravages of the worm, was from nine to eleven inches. I think I shall plant an acre or so next season.

Tuscarora Corn.—I shall plant two or three acres, or perhaps more, of the Tuscarora. I shall make my roasting ears, and do my soiling with the sweet corn. It is quite a treat among us, and the merits of the different kinds have been much discussed. I am very proud of it all, but shall take my stand with the Tuscarora. Bread made of it will suit me best, as it has no oil, and then its growth is rapid. It was the most beautiful corn, until it was injured by the rains, that I have ever seen; it vegetated quickly, grew off with great rapidity, and was the deepest green imaginable. I think too that I can challenge any corn we have for product, except, perhaps, some very large corn which I have been improving for years. Of this last mentioned corn, I feel confident that I shall be able to select ears, forty or forty-five of which will shell a bushel. It is planted three by three feet, two stalks to the hill. The size of the ears is hardly credible, but it shall be weighed and shelled in the presence of witnesses.

Parsnips.—I do not know the size, or rather the length of the parsnips. The last I pulled up were sixteen inches long; that was early in July. Their diameter is three to three and one-half inches; the ground was made rich, and subsoiled.

Lucern.—I put the lucern in drills one foot apart. The ground is completely covered with it. The plants are of every length, from one to three feet. The first rows were sown too thin, I have some seed left, will they vegetate next spring? [Yes. Eds.] I have some parsnip seed left, will that vegetate? [Doubtful. Eds.]

Buckwheat.—I have a fine crop of buckwheat growing for seed. If I fail either in that or parsnips, I shall charge it to your account. I will let you off with the lucern, because you told me in advance that it would not do here. But why did you tempt me by sending the seed? Will it fail tho'? Remember that the ground is now perfectly covered by it, and that many of the plants are two to three feet long. True there is present a great deal of clay, but I nullified that to a great extent, with charcoal, ashes, leather, wool, woolen-rags and other things. I have kept the weeds out. What can I do now? Remember this is my pet crop, tell me if you please, what to do this fall and next spring. Shall I get gypsum, put on more charcoal, or both, or what? [Either, or both will be good. Ed.] I have the coal.

How to Make Charcoal for Farming Purposes.—Tomfoolery.—I piled up the brush of three acres of ground last spring, covered it with straw

and dirt, and charred it all in a single heap. I had some bones in it too. They call this tomfoolery and book farming, here, because I learned it from your paper. I find this coal useful to keep down odors about my stable, woolheaps, and other places which usually send forth their pestiferous breath upon the atmosphere we breathe.

Experiments at Fertilising Missouri Land.—I have done a great deal this season with the sole view of fertilising my land. I turned under four acres of fine clover as I have ever seen grow. I immediately sowed corn on the same ground, with the intention of turning that under, but it is so badly blown down, that I cannot well do it. I must cut it up. It will make me a fine parcel of food, and has served to keep the sun from scorching the ground. I have turned under some rye, and several acres of buckwheat; and shall turn under more wheat shortly. The ground has always washed badly, and will continue to do so. Had I not better construct some side-hill ditches to prevent it? Please give me your good advice, always bearing in mind, that a little labor for the purpose of improving my land, is more a matter of amusement than otherwise. [There is no method, in our opinion, to preserve side hill land, equal to a thorough and complete system of ditching, and cultivation of all crops on a level; that is, the ditch falls three inches in ten feet, and the furrows in plowing always level. See our remarks upon this subject in late numbers of the Agriculturist. Eds.] I shall not mind the labor. Will it preserve the land?

IMPORTANT TO WESTERN FARMERS.

THE following article from the Journal of Commerce is recommended to your particular attention.

The great abundance and cheapness of Indian Corn in the West is the cause of so much actual slovenliness in hauling and preparing it for market. This was somewhat pardonable when it was only worth 8 to 10 cts. a bushel at home, and no facilities to send it abroad for a better market. But that day is past. Improvement in transportation has put the rich provisions of Indiana and Illinois within two days of New York, and farmers must mend their old ways:

Indian Corn.—Some months since we called the attention of our Western friends to the fact, that a large portion of the corn coming forward from that section was damaged, for want of care in preparing it for market. As the season approaches, and the corn is to be housed,

we again refer to the subject, in the hope of an improvement for the coming year. Western mixed corn has been selling here for the last few days at 58 to 60 cents for sound parcels, and 43 to 54 cents for heated, very little of the latter bringing over 50 cents. The average difference between heated and sound corn, taking the extremes into account, is about 5 cents per bushel. Now let it be remembered that there is no difference in the corn when first harvested, and the importance of the subject will be manifest. The corn when picked, should be placed in cribs, raised a foot or more from the ground, with a narrow base, swelling on each side towards the eaves, and roofed so as to be perfectly water-tight. Much corn is damaged on the cob by exposure to storms, or for want of air when drying. The corn should not be shelled until it is to be sent to market; it should then be thoroughly fanned or cleaned from chaff, as the presence of this substance is one of the principal causes of its heating in coming forward. Even when corn passes as strictly merchantable on arrival, it will heat on a voyage to Europe, unless perfectly clean when sent aboard. More than two thirds of the Western corn which has come forward this season, has proved unsound, simply for want of precaution on the part of the original owners.

There is another point connected with this subject, where an amendment would give increased value to the product; but perhaps it would be impossible to affect it. We allude to the mixture which gives its name to most of the Western corn in market. Yellow or white, when sold separately, will average, one month with another, about 2 cents per bushel each more than mixed, which is but the same corn thrown together. The white is wanted for a different market, and the yellow is much more attractive when placed by itself.

NEW JERSEY HORTICULTURAL SHOW.

Thus was held this year at Jersey City. Notwithstanding the drouth and other nupropitious circumstances, the show of fruits and vegetables was a very creditable one.

"I am very glad," remarked a gentleman in our presence, to his daughters, "to see so many premiums awarded to our fruits. It is such a stimulant toward improvement to our gardeners."

No comment is necessary to prove the value of these exhibitions. They promote to improvement. It is a pity that all lovers of good fruit cannot see how much they might promote this improvement, by visiting exhibi-

tions and contributing something towards premiums to the men who toil to produce such fruit as gladdens the eye, and makes those who succeed in growing it, proud of having it praised in the exhibition room—it stimulates them to try to provide better, and better still. This is what these shows are for, and why they should be visited by those most interested.

FLAX COTTON.

WE take early opportunity to call attention to this subject, as winter is the time to prepare for spring. Growing flax for manufacturing on a large scale in this country, by the new process of preparing it so as to resemble cotton, is firmly believed to be practicable by a great many persons. It seems by the following notice in an Ohio paper, that that state is leading off in the true spirit of a go-a-head people:—

"Hon. JOHN F. BEAVER, of Newton Falls, is now engaged in the erection of machinery for the preparation of flax cotton. The editor of the Warren Whig visited him a few days since, and says:—

Mr. B. is sanguine of the ultimate success of the scheme for the substitution of flax in place of cotton. He showed us a specimen of the cotton after the third process. It resembles in color and texture the common lint, made by tearing up a piece of old linen cloth. Five processes are necessary to prepare the flax cotton for the spindles. I learned from Mr. B. that twice as much flax has been raised in the neighborhood of Newton Falls this year as there was last. In passing from there to Ravenna, beautiful fields of flax, in full bloom, were common along the road.

CHARACTER OF BOYS.

Boys make a sad mistake, when they learn to chew, and smoke, and drink, and swear, because they think it manly. I made the same mistake forty years ago; but with grey hairs cometh wisdom, and now I shun such a boy as I would a wild animal. It is a great mistake to think any of those *accomplishments* are manly. Such boys are never admired by good men, lovely women or lovable girls.

Boys make a sad mistake, when they get mad with the horses, oxen, cows, or other poor dumb animals, and beat, and bruise, and kick, and scold and swear at them; if they think by so doing they will be able to control them any better, or tame their anger or intractableness while trying to teach them how to perform some of the operations on the farm. "A soft

answer turneth away wrath;" so does a soft word to a dumb brute.

Boys make a sad mistake, when they think a city life is so much happier and more pleasant than theirs upon their father's farm, where they have so many of the real substantial comforts of life, that boys in the city never enjoy.

—••—
THE TRAVELLER.—No. 8.

WE approach Athens, literally, by railroad, as mentioned in my last from Union Point; we do nothing more, for the terminus of the road is upon one hill and the town upon another, half a mile off, a deep valley and mill-stream intervening. Upon this stream are cotton and paper mills. This part of Georgia was designed by nature for a manufacturing district, and in the hands of a New England population, would be made so in a very short time. The country is a high, granite, hilly region, with numerous rapid, rocky streams, with a salubrious climate; while the soil, generally, is not the kind to delight a southern planter, for the reason it requires a different mode of tillage from that which they have long practiced, to the destruction of some of the most fertile spots in the state.

The whole soil of this part of the state seems to be rocks turned to dust—doomed to decay—for it is made up of decomposed granite—the color and strata of the rock and the veins of gneiss, are seen in the clay in the same position as when all was solid rock. Wherever granite rocks are found in place, there may be seen the decay still progressing.

Every body condemns the soil around Athens as poor. I grant that it is not as rich as the bottom lands of the Chattahoochee, yet it is far better than some portions of Massachusetts, which are worth a hundred dollars per acre for farming purposes. The surface of the country is very uneven, and liable to wash, and has been greatly injured in that way, and will be greatly more injured unless the system of side-hill ditching is adopted: not the little miserable affairs which have been attempted upon some farms I visited, but a most thorough and complete work, of large and strong ditches, so as completely to prevent the water from coursing down the cultivated hill-sides, as it has done ever since the country was settled by the whites.

There is a spot within the town cycled, a botanical garden. I believe it belongs to the college—an institution of some notoriety here—and a more romantic, beautiful spot to improve is rarely seen. An expenditure of three or four thousand dollars, instead of the scanty pittance,

doled out to the gardener, who seems to be a man of taste, would make this garden a place for the Athenians to be proud of. There is an unfortunate lack of this kind of public spirit of improvement and beautifying towns, in nearly all of them at the south. It is not for want of individual spirit, for that abounds and shows itself in the adornment of a great many private mansions, of which, and of a high-bred, refined population, Athens may proudly boast.

Much as the soil is decried, I found wherever it is treated to a deep cultivation, with manure, it always pays for such attention. It is the very home of peaches and most kinds of fruit. This has been demonstrated pretty well by Dr. Ward, who is a scientific gentleman, devoted to horticulture and the cultivation of fine fruits.

The natural growth of timber, which always affords some indication of the quality of soil, upon the hill land, is oak, hickory, and short leaf pine: on the bottoms, poplar, ash, gum, &c.—the whole once covered with cane. I generally make it a point in visiting places, to enter as much as possible into conversation with those who cultivate the soil, upon the best manner of improving it, and increasing their crops, with a view to obtain and impart information. I found here, one man of a class I have often met before, who insists that cast iron plows are the ruin of the land; that they turn the earth over and bury all the fertile portion so deep, nothing will grow afterwards. He fully believes the soil never should be stirred over two inches deep, and that the little, old fashioned shovel plow is the best ever invented. However, there are some of his neighbors who believe in using better tools, and it is to be hoped, that example may produce a good effect upon the next generation, if it does not upon the present one.

Cherokee Rose Hedge.—The name of this rose conveys the idea to many persons that here, in the country once occupied by that people, is its native home, and that it will flourish in all places of parallel latitude. It does grow and form a good fence, but is not to be depended upon. Dr. Camac told me that his father's hedge was killed to the ground in the winter of 1834, and '35, but grew again from the roots. In latitude 32°, in Mississippi, it was killed the same year so it never sprouted, except here and there a stalk. Although it forms one of the most impenetrable hedges, when in vigorous growth, it would never answer to depend upon a plant for general farming purposes, which is liable to be destroyed in one night of hard frost.

In mentioning the name of the late Dr. Ca-

mac, I cannot pass it by without leaving a slight tribute to his memory, as one who was alive to the importance of working a radical change in Southern cultivation, and teaching the people that agriculture was a science, which required study and improvement of the mind to improve the soil.

The people of the south owe a debt of gratitude to this good man, for the benefits they have derived from that excellent agricultural paper, *The Southern Cultivator*, for he was its founder. He also introduced a variety of choice fruits around his mansion in Athens, to demonstrate to the citizens how easily they might provide themselves with such luxuries, upon a soil and climate where they already enjoyed the still greater one of health.

Improvement of the Soil in this part of the state can be best and cheapest brought about by the use of lime, and peas as a substitute for clover, with the addition of some fertilizer, such as guano, bone-dust, or phosphate of lime, and an improved system of cultivation, with improved implements. A change for the better is already going on, and when the time comes that men cannot run off to the West to get new and cheap land, in some bilious swamp, then will these granite hills be appreciated at their real value, and these old broom-straw fields and pine barrens be restored to usefulness, and covered with a healthy, happy, wealthy population.

March 18th was a day worthy of the latitude of Quebec, but the cold did not stop the corn planting. The average yield of corn is estimated at ten bushels to the acre. The average yield of cotton, about 400 pounds, in the seed. It grows very small, say about two feet high, and is planted, on most of the lands, two and a half by three feet.

Col. Billups, one of the gentlemanly planters of Athens, whose hospitality I partook of, contends that side-hill ditches will not answer the purpose here, because the rain falls in such torrents, it fills up or sweeps them all away. That was the case upon his plantation five years ago. I contend, however, that if made as they should be at first, they will neither wash away nor fill up.

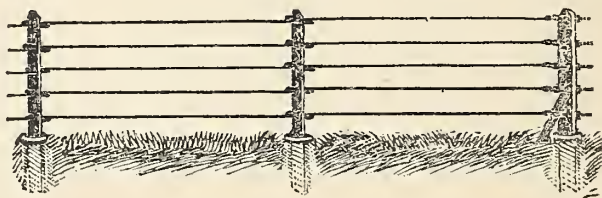
Light Crops of Oats.—I had supposed this a favorable soil for oats. But I have the authority of Dr. Hull, an intelligent planter, for saying that many of the fields sown do not average 500 lbs. straw and grain, all told. The probable reason is, the ground is so poor for want of manure, so shallow plowed for the want of better plows, that a few days of sun exhausts all the

moisture, and leaves the tender plants to struggle for life in a bed of dust, lying upon a foundation nearly as hard as brick.

Cultivation of Grass.—This is almost entirely neglected. I know the difficulty of making a hay crop in this climate, yet I cannot help thinking it may be profitably done upon many spots unfit for any other crop.

PHIPPS' IMPROVED PATENT WIRE FENCE.

By this improvement the great difficulty in the construction of wire fences—contraction and expansion, which has heretofore deterred farmers from building the cheapest and best fence ever brought into use—is entirely obviated, without adding to the expense. This contrivance is as simple as it is perfect. The wires, the best size of which is No. 4, one-fourth inch diameter, are made in twelve feet lengths, with peculiar shaped heads, which are inserted in the posts by springing them together, and when the line of fence is all up and drawn tight, no one of the bars can be taken out without loosening the tightening screws, and then the whole can be taken down and removed with great facility, or



WIRE FENCE.—FIG. 62.

any one pannel or rod can be taken out so as to form an opening through the fence. It will be observed, the power of contraction and expansion operates upon bars only twelve feet in length, each independent of the other, and so constructed that it does not affect the whole fence, but moves back and forth in the mortise of the post without becoming loose. The posts are made of flat bars of iron, $1\frac{3}{8}$ by $\frac{3}{8}$, which may be fastened in the earth by setting them in blocks of stone, brick, or wood, or filling the hole bored to receive them, with rubble stone and lime grouting. It is recommended in each length of fifty pannels, to have a stout spiral spring to each wire, which will keep up the tension. After the fence is all up, it is fastened firmly to a well braced post at one end, and then drawn tight by screws at the other end, inserted in a wooden post so that they are not seen, thus obviating all objections to unsightly machinery. Another advantage of this fence is, that it is all prepared ready for putting together at the manufactory, so it can be set up by a common laborer. The patentee informs us, that it can be made and delivered, done up in

bundles ready for shipping, at a cost of one and a half to two and a half dollars a rod.

NORTH CAROLINA GRAPE CULTURE.

DR. WELLER of Brinkleyville, North Carolina, has favored us with a communication in answer to some remarks of Reviewer, which is too long for publication [in the *Agriculturist* at present, by which he shows that a vineyard can be made very profitable. His favorite grape, as it should be in all the south, is the *Skau-per-nong*, from which he made last year, some sixty barrels of wine. Some of his wine sells from \$4 to \$6, a gallon, and is highly approved.

His highest price Skaupernong wine is made by adding one third brandy distilled from juice of the same kind of grapes.

Skaupernong Hock is made without brandy, by adding three pounds refined sugar to the gallon. Skaupernong Champagne, is one-fourth brandy, with one pound of sugar to the gallon.

Dr. W. finds no difficulty in preserving his wines, or finding sales at fair prices, notwithstanding the prejudices of foreign wine dealers against anything in the shape of American wine. We are of opinion, notwithstanding Dr. W.'s practice, that it would be better to leave out the brandy and sugar, and let the wine be the pure juice of the grape. The vine growers in Ohio at first added brandy and sugar, but we believe now they generally reject these adjuncts, and produce a superior quality of wine by so doing.

ALDERNEY COWS.

WE saw early in September, in their luxuriant Connecticut pastures, Alderney cows, imported by Messrs. Taintor & Buck, some two years since. We had before seen them, when just arrived from their European voyage, thin and gaunt from their long passage, and light in frame and bone from their customary breeding in the quiet vales of the Isle of Jersey. They appeared then almost haggard, and one or more of them did not survive their extreme hard voyage. The irresistible conclusion of the casual observer would have been, that they could scarcely possess sufficient merit to cover such apparently inherent scragginess. Yet a moderate degree of attention and good feed has spread these new comers into the most ample dimensions. We have seldom seen finer, nor do we care to see larger milking animals than these. They do not possess the symmetrical and rounded form that characterises the short-horns and Devons, nor can they probably ever rival them for the yoke or shambles. But for choice dairy animals, yielding rich sweet milk,

and deeply-yellow, finely-flavored, waxy butter, they cannot be excelled, nor often equalled.

Daniel Buck, Esq. of Poguonnock, near Hartford, who divided the importation with Mr. Taintor, and one or two others, has several of the animals originally imported, together with many of their progeny and their crosses. We are glad to notice there is a quick demand for them, and at remunerating prices, among the more intelligent of his neighbors; and we are quite certain, that could any gentleman partake of their exquisitely flavored butter, as we have done, at the tables of several of the owners of the Alderneys, they would avail themselves of the first opportunity that presented, for stocking their lawns with enough of them at least, to furnish the cream and butter for their own tables.

NEW TREES, SHRUBS AND PLANTS.

WE do not know a more intelligent and enterprising class of men than American nurserymen; and when people complain how few rare things they introduce into the United States, they might, with great propriety, complain of the want of taste on the part of wealthy people in adorning their grounds with those beautiful new trees, shrubs, and flowers, already found in abundance in the gardens of our nurserymen. It is not long since that we casually visited the country place of one of the wealthiest men of New York, recently deceased. Judge of our surprise when we found only a few quite common native trees, scattered here and there, without any taste whatever in the arrangement, and not a single flower or shrub upon the large lawn in front of the house.

When wealthy men will patronize American nurserymen, then and not till then, may they expect them to employ scientific travellers abroad to enrich their grounds.

We copy the following from the *Gardeners' Chronicle*, which will show a little what is doing in England.

"If the reader would wish to know what is doing in this country, in the importation of new plants, he must visit Exeter. Near that ancient city lies a gentle valley, forming the nursery occupied by Messrs. Veitch and Son, in which alone will be found more new and valuable plants than in any place in Europe, with the single exception of the Royal Botanic Garden at Kew—plants obtained by private enterprise for commercial purposes, and not gathered together by the power of a mighty government. By means of excellent collectors, (two brothers of the name of Lona,) and liberal disbursements,

California, Peru, Chili, Chiloe, Patagonia, in the West; and the Khasija hills, the provinces of Tenasserim, Java, Malacca, and the ghauts of Malabar, in the East, have been gleaned, and the result is gathered into hothouses, or transferred to the open air in the fertile soil and happy climate of Devonshire. Let us record a few of the species which caught our eye on a recent visit to this wealthy establishment.

"First among the new plants is to be mentioned *Saxe-Gothaca conspicua*, a most beautiful evergreen from the Andes of Patagonia, with the aspect of a Yew tree, which H. R. H. PRINCE ALBERT has permitted to bear one of his names. This tree has lived for four years in the open air, and has all the appearance of being as hardy as an Araucaria. From the same country comes *Fitz-Roya Patagonica*, another valuable Conifer, with drooping branches, and also the habit of a Yew; with the *Libocedrus tetragona*, an Arbor-vitæ-like tree, having four-cornered shoots; all, we believe, exclusively in the possession of Messrs. VEITCH.

"Among other evergreens, the existence of which in England is unsuspected, is the great Oblique Beech Tree, from Patagonia (*Fagus obliqua*;) *Eucryphia cordata*, with hard, heart-shaped leaves, and flowers like a Tea plant; *Castanea chrysophylla*, the Evergreen Californian Chestnut; great bushes of *Philesia*, just beginning to produce their crimson tubular flowers, 2 inches long, in the midst of hard, stiff, deep, green leaves; *Pernettya ciliaris*, with its black-green broad leaves and heaps of dull purple berries, not to mention the other species *mucronata* and *angustifolia*, loaded with pale berries, gay with ruddy tints; *Laurus aromatica*, a Chilian evergreen, whose leaves are much more fragrant than Sweet Bay; *Embolhrium coccineum*, long tufts of crimson blossoms; *Eugenia apiculata* and *Myrtus Ugni*, Chilian Myrtles, the latter with a fruit like a purple Guava; and, finally, the rare and curious *Desfontainia spinosa*, with the air of a Holly bush and the flower of a scarlet trumpet Honeysuckle. Of this one single flower had been produced upon a cutting in a pot.

"Many are the new or little known evergreen Ber-berries collected here: *B. Darwinii*, growing into a round, glittering, exquisitely beautiful bush; *B. flexuosa*, a handsome shrub, with straggling branches; *B. lutea*, a pretty diminutive thing; and several other species, at present undetermined. *Eurybia alpina*, from New Zealand, here vindicates its claim to hardiness, along with *Escallonia Pappigiana*, a Peruvian

bush, loaded with white flowers early in the summer, and a great stiff-leaved *Dracæna*, from New Zealand, which may be *Dr. indivisa*.

"Nor are deciduous hardy plants less common here. An Indian palmated *Rubus* is loaded with yellow fruit as large as an Antwerp Raspberry; great masses of a *North wall* are covered with the scarlet perennial *Tropæolum speciosum*, which disregards frost but abhors the sun; the hairy-stemmed *Tropæolum Lobbianum* is curling round a rough stake, and decorating it with its vermillion-colored flowers; and *Pavia Californica*, the Californian Horse Chestnut, has established itself in the open quarters of the nursery. Quantities of huge Indian *Lilium giganteum* are having to prepare for flowering another year, and heaps of rockwork are glittering with *Oxalis speciosa*.

"Among plants of home origin, we ought to point out the *Hedera Ragneriana*, a kind of Ivy with monstrous heart-shaped leaves; *Cotoneasters*, and such plants worked half-standard high on the common Thorn; a noble looking Holly called *Ilex alta-clerensis*, which seems to have some of the blood of *balearica* in it; a handsome variety of *Arbutus Andrachne*, called *photiniaefolia*, and most beautiful specimens of that noble *Fuchsia corallina*, whose origin has lately been disputed, but which bears unmistakable evidence of having been derived in part from *F. radicans* or some allied species.

"This sketch of the hardy plants that are already saleable in this establishment, renders an account of the tender plants less interesting for the moment. To them we may return hereafter. For the present it is sufficient to name among the new plants *Lapageria rosea*, a climber from Chiloe, with very large crimson blossoms, a fine new Hoya, with long leathery leaves, some most elegant Indian *Sonerilas* with variegated foliage, a Peruvian Begonia, whose leaves are one confused stain of crimson, purple, green, and silver grey; *Cinchona Condaminea*, one of the true Peruvian bark trees, a plant with a most delicious perfume, now flowering for the first time in Europe; and quantities of Indian Orchids, among which the *D. albosanguineum* stands pre-eminent. As to the Orchids, no plants can exceed their health and beauty, unless it be the choicest of Mr. RUCKER's collection. In short, turn where you will, the eye meets nothing but what is most fine and rare, in this surprising collection of Messrs. VEITCH."

Plow clay lands deep in the autumn and winter, and sandy lands in the spring.

AMERICAN PLOWS IN FRANCE.

IN our last number, page 319, under the head of American Plows in Europe, we quoted from Mr. Johnson's letter, what that eminent agriculturist, Count de Gourcey, said of them in France. Since this we have been called upon by Mr. Taintor of Connecticut, who sent these plows of our manufacture to Monsieur Pichat, Director of the National Merino flocks at Rambouillet. Mr. T. was so obliging as to hand us the following, which was translated for our pages by his accomplished daughter.

Rambouillet, 20th Feb. 1851.

MY DEAR SIR:—We received in good season, really remarkable plows you sent us, for which please accept our most sincere thanks. For my own part I feel especially grateful, for the plow destined for me is a perfect model. I have tried it myself and am quite enchanted with it. The moveable point, so easily adjusted at the option of the plowman, without affecting the strength of the implement, strikes me as no less useful than ingenious. [It was a self-sharpening plow.—Eds.]

Your opinion of our soil was entirely correct. From its nature it wears out our implements very fast, thus much increasing the expenses of repairs, &c. To convince you how much I value your plow, I need only tell you, that I shall have all mine hereafter built on the same plan. I intend taking all possible means to make it known, and to extend its use throughout France. In gratitude to you, sir, I wish it to be called the *Taintor Plow*; for its introduction has really been a great boon to my country. It shall appear in the next agricultural exhibition at Versailles, where, I have no doubt, it will be as highly appreciated as it deserves.

I am, dear sir, very respectfully yours,
PICHAT.

JOHN A. TAINTOR, Esq., Hartford, Conn.

CURE FOR FOUNDER.

THE horse, of all the domestic animals, is the most disposed and the most liable to accidents and disease, arising in part from his peculiar habits, but more generally from the use to which he is put; and perhaps, of all the diseases, there is not one of more frequent, and, at the same time, of so fatal occurrence to the value of a good horse, as the founders; which are of two kinds, and may be denominated chronic and acute. The former manifesting itself in a general stiffness of the limbs, and a contraction of the chest; the latter always the result of some immediate cause, and is most frequently induced

by hard driving, with improper graining and watering.

Some eight years ago, it was my misfortune to have a valuable horse badly foundered in his fore feet. Being ignorant of the disease and its consequences, I placed him in the hands of a celebrated veterinarian, with a request that he should spare no pains or labor to effect a cure.

He commenced operations by applying the hot bath to the feet, legs and breast, and at the same time bleeding in the neck and feet, opening a vein in each foot, near where the hair joins the hoof. At the first bleeding he took about ten quarts of blood, without apparently affecting the animal. The second day, I think we administered some physic. This process of bathing, bleeding, and physicking, was kept up as often as every third or fourth day for the space of ten weeks. The horse, at that time, had so far recovered as barely to hobble out of the stable.

This mode of treatment was continued at intervals, and in about six months my doctor pronounced the horse well, but it was at least eighteen months before he was entirely free from all symptoms of the disease; having, during that time, lost the entire hoofs from his fore feet—new ones having grown out in their stead.

As bad luck would have it, about two years after the first accident, the same horse was again foundered, and if possible, worse than at the first time. Feeling that the expense and trouble of a second cure would amount to more than the value of the horse, I ordered the stableman to take him into the back yard; I then called the blacksmith, had the shoes taken from his feet, hoofs pared off as thin as possible, and with a tool, such as lumbermen mark boards with, cut the arteries in each toe, just at the point of the frog. The blood continued to run until the horse dropped down, when it stopped, and in a few minutes he rallied and got up. I then took a half barrel tub, filled it with water, and placed the horse's feet in it; I had near, a large box of ice, (it being July,) from which the tub was constantly supplied, until about one hundred pounds were consumed, requiring about fourteen hours. So intense was the heat in the feet and legs, that a constant steam ascended from the water, the horse remaining perfectly quiet, and apparently free from pain. At this point of time he was taken with the shakes; I put my hand to his feet, and found them perfectly cold to the touch. I then had him removed from the tub to the stall, and wrapped in blankets; where he had stood perhaps five minutes, when he dropped apparently dead; but by applying the straw

whisp, he was shortly restored to his feet, and by adding a double quantity of blankets, the perspiration started very freely. I then administered half a pound of glauber salts, and left him in care of the hostler for the night. On going to the stable in the morning, I found my horse no different in appearance from one just off from a long, but not a hard journey. I took him to the smiths, had the shoes replaced, and that day rode him to my farm, (two miles distant,) and back again. That was the last of the founders. I now keep the same horse, and he is perfectly sound and a very valuable beast.

For the chronic or chest founders, I should recommend the blanket sweat. This can be effected by wrapping the shoulders, or the part affected, in blankets very thick and warm, and by moving him until he perspires freely. On removing the blankets shower copiously with cold water.

B. WEBSTER.

Portsmouth, N. H.

CULTIVATE FRUIT.

WE are surprised at the apathy of our citizens to the cultivation of fruit. Nine tenths of the intelligent, industrious, pains-taking, and economical people, who will busy themselves twelve or fifteen hours a day in their ordinary pursuits, will entirely neglect providing themselves and their families with this luxury, though they may have ample grounds for the purpose, every way fitted for producing it in profusion.

We call it a luxury, but it is more properly one of the necessities of life; and for the want of it, persons frequently become diseased, or continue so, if disease is induced from other causes, when the free use of seasonable, well-ripened fruit would have restored them at one fiftieth part the expense incurred by apothecaries' and doctors' bills. Who ever heard of an ailing family, whether adults or children, who indulged freely in wholesome fruits, and abstained from the made-up dishes of the pastry and other cooks?

But it is not as a corrective or medicine only, that we deem fruit invaluable as an article of diet. It has a direct money value, estimable in dollars and cents, for the amount it contributes as food to the support of the human system. This is conclusively proved, both theoretically and practically; for accurate analysis has shown that cultivated fruits contain large proportions of nutritive matter, and experience equally proves that when fruit enters largely into the diet of the family, a corresponding diminution of other food is always apparent. As profit, then, is directly concerned in the cultiva-

tion of good fruit, we hope we may command the favorable attention of our readers for a moment while advocating its increased cultivation.

Many residences in the city, and nearly all in the country, have yards or grounds sufficiently extensive to admit of the cultivation of some choice fruit trees; and where they are too limited for these, a few well-selected grape vines can seldom want suitable earth for rooting, or a favorable wall for climbing with its profuse branches. The yards even of the densely built city of New York, if well planted and cultivated with vines, would yield no inconsiderable proportion of the grapes required by its citizens. Yet, how few tables in this city, and even in the country, are supplied with this delicious fruit from their ample surroundings.

We know a half acre of cultivated raspberries, (the genuine red Antwerp,) that produced in a single season, what sold for \$1,400 in the New-York market. Yet, how seldom do people have a plate of this fine fruit of their own raising, to treat a friend with.

The strawberry is one of the most wholesome, as it is one of the most delicious of fruits, and a patch of four rods square, if judiciously selected and nicely cultivated, would yield an abundance for a large family; yet, not one household out of every hundred in the Union, is supplied with any except such as they buy or gather from the untitled meadows.

The cherry is a hardy tree, a prolific bearer, and a most delicious fruit, if the finer varieties be selected; and the tree is decidedly ornamental withal; yet, numberless families get no cherries worth eating, save what they beg or buy at extravagant prices.

The pear, the peach, and the plum, are abundant bearers, and the richness of flavor of their best varieties are not surpassed by any that grow either within or without the tropics. They have of late been subjected to their respective scourging diseases of blight, the yellows, and the curculio; but a moderate share of attention to their proper treatment and remedies, will remove each, and afford an ample return to such as will give a small part of their time to cultivating them.

If objection be still made to the nice and discriminating attention required by the foregoing fruits, what possible excuse can our indolent frame for the neglect of that hardy, self-sustaining, universally acceptable fruit, the apple? This, the king of American fruits, will grow everywhere, produce abundantly, and of the choicest flavor, provided, only, that a suitable

position, fertile soil, and the best varieties, and adapted to the locality, be adopted. If objections—thick as blackberries—can be alleged against the cultivation of any or each of the other fruits, none can be successfully maintained against this. It is a fruit that is suited to all tastes, as it runs through any conceivable shade of flavor; it is in full season from July to June, and is equally adapted for use when plucked from the tree, as when prepared by an almost infinite variety of forms, when artificially compounded by skillful cookery. We marvel at the neglect so frequently observable in the cultivation of this splendid fruit.

A reasonable degree of attention to these products, would not only be attended with decided pleasure in the planting and rearing of the trees, and in the luxury and support they yield to the family as food, but there would be frequently, besides, an ample result in money profit, from the sale of the fruit. A friend whom we visited the past season, had but two or three acres around his house, and this mostly devoted to lawn, gardens, out buildings, and ornamental trees; yet he informed us that a fruiterer solicited the privilege of gathering some of his surplus cherries for market, and paid him \$75 for what he scarcely missed. He had an abundance of choice peaches, and we have not, for years before, seen such a profusion of the daintiest plums and pears, including barrels of the fairest Seckles we ever saw, the white Doyenne, Bartlett, &c.

The progress of the age, we are happy to observe, is decidedly towards fruit raising. Reading, observation, and the impulse given by the various agricultural and horticultural societies of the country, have stimulated effort and sharpened invention, and thousands of our more intelligent countrymen are commencing a system now, which posterity will carry forward to a successful issue. It will be a disgrace to them if the finest fruit-producing country of the globe does not hereafter yield an abundance of fruit to supply every mouth in the Union.

WHEAT IN GEORGIA.

MR. R. PETERS of Atlanta, one of the most enterprising and improving farmers of Georgia, writes us under date of August 15th, as follows:—

I decided three years ago that wheat could be raised in the Cherokee counties of this state to a profit. After three years of trial, two of which failed, owing to remarkably bad seasons, I have this year produced 417 bushels from

nineteen of seed. Upon one measured acre—*forty* bushels. It is known as the Tubman variety, a very early white wheat, and is the best out of twenty-five kinds tried since 1849. The ensuing season I *go in* to beat any farm in the state, both in quality and yield per acre. I therefore request you to forward me ten tons of the best Peruvian guano, and I will sow one hundred acres with guano, and fifty with lime, which I consider will be a fair experiment. If it fails I will try again, and if it succeeds, I hope all my neighbors will profit by it."

This is the true spirit which animates all the improving agriculturists of America.

Georgia has produced this season, one of the best wheat crops ever grown in the state; and yet Mr. Peters, at his great steam mill at Atlanta, is grinding wheat grown in Ohio and Michigan. This is a very singular result, and one not anticipated by farmers or millers, when the crop was harvested in May and June. It is in consequence of the most extraordinary drouth ever known, which has entirely cut off the corn crop, and obliged farmers to make use of their wheat, not only to feed their people, but horses, mules, and pigs.

Mr. Cunningham told us he had been offered wheat at his mill at Augusta, in even exchange for corn.

COLOR OF COCHIN CHINA FOWLS NOT MIXING.

MR. TURNER of England, asserts that he has bred buff, white, and grey Cochin China fowls together; and that the produce of these were all of clear, distinct colors—that is, pure white, pure buff, or pure grey.

This is the first time we have heard of white or grey Cochin China fowls; we had understood that the pure breed were always buff. But so far as our observation is concerned, we see little or no difference between them and Shanghais. These are of various colors, black, white, grey, red and buff. At least so they are called.

Of their distinctive names however, we know little, and care less. These fowls are one and all too long legged to find a place in the poultry yard, in our humble judgment; although we have many excellent friends, particularly at the south, who differ with us in opinion.—But in that warm climate, be it remembered, they will do infinitely better than at the north, where cold weather checks their growth, and prevents a full development of carcass and egg-laying.

Suppose by way of *convincing* us, some southern friend sends us a brace of fat capons, so as

to enable us to judge better of the merits of this rather favorite breed or breeds of poultry among them. Dining on fat tender capons is a very *convincing* argument, to which, we beg to be understood, we have no *serious objection*!

COW MILKERS—CHURNS.

I SEE in your Journal an advertisement of a new invention for milking cows. Please state to us the cost of the article, its probable durability, and the manner of using it, so that we can better judge whether it is worth our attention to send to New York for it. [a]

And then please describe some useful invention for a churn, by which the milk, direct from the cow, can be converted into nice butter, without the trouble of setting away to cool and be skimmed. By so doing you will oblige many of your Texas subscribers, who have hundreds of fine gentle cows, which, at present, are of no other use than to breed from, as we cannot incur the labor and expense of making butter in the slow, toilsome, old-fashioned way. [b]

You have told us a great deal about your guano and other fertilisers. This will do very well for those who live on worn-out lands, and the poor arid plains of North Carolina and Georgia; but our lands in Texas are already as rich as they can be made; we only wish to know how to turn the productions of our fertile valleys and verdant prairies to the best possible advantage. [c] T. J. P.
Gonzales, Texas.

[a] The price of cow milkers is \$2 50, and they are thus described:—

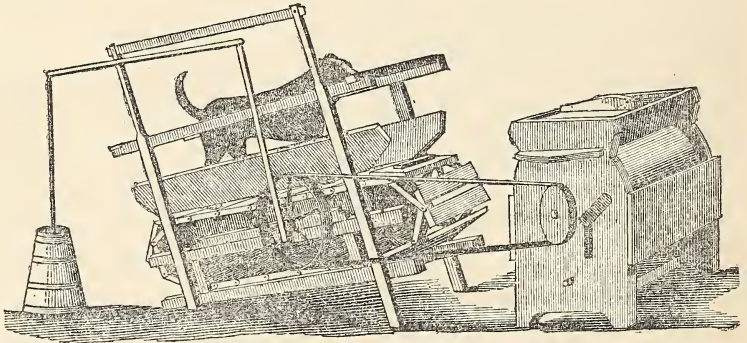
"This apparatus consists of an air and water-tight bag, composed of india rubber, gutta percha, or other suitable material, encircled by an elastic strap or band at top, and provided with an aperture at bottom, fitted with a silver tube of a size capable of entering the milk duct of a cow's teat, which tube is provided with a piston also of silver, and packed so as to be airtight; or the piston may be made of gutta percha, in which case no packing would be required. When using the apparatus, the bag is turned down, so as to expose the silver tube, which is inserted in the milk duct of the cow's

teat, and the bag is raised all round, so as to enclose the teat, and prevent the air entering; the piston is then withdrawn, and a free passage left for the milk through the tube into a can placed underneath. The flow of the milk is facilitated by the contraction of the elastic band round the mouth of the sack, and by warmth caused by the exclusion of air between the sack and the cow's teat, which is about equal to that produced by a calf in the act of sucking.

Several persons have used this apparatus in this vicinity, and inform us that they cannot depend upon it."

[b] Any churn of a suitable size will answer, though we should much prefer the thermometer churn, (figured below,) for this purpose, as the action of churning with this is very simple and easy. It can be moved readily by hand or by dog, or sheep or goat power, as figured below.

Milk or cream should be warmed to a temperature of about 62 degrees before churning. This greatly facilitates the process of bringing



RAILWAY CHURN AND DOG POWER. FIG. 62.

the butter. Cream will generally produce butter much quicker than milk; and the richer the latter is, the sooner the butter will come. Much of the celebrated Goshen butter is made direct from the milk.

[c] The best advice we can give our correspondent is, if he has not got them already, to procure the ten bound volumes of the *Agriculturist*, and after reading them through and practicing all their good precepts, leave his fine fertile country and pass a few months here at the north, and see all that is going on among us, in the way of improvement,

CULTIVATORS of the earth are the most valuable citizens. They are the most independent, the most virtuous, and they are tied to their country and wedded to its liberty and interest, by the most lasting bonds.—*Jefferson*.

SOMETHING ABOUT TREES.

THE Minister of Public Works in France has ordered the public roads bordered with trees. Those of forty-eight feet wide, or wider, are to have a double row.

"This is as it should be, not only in France, but throughout the world. How delightful it would be in the warm summer to ride all day on a good road, in the shade. Besides, the value of a farm, in our estimation, would be enhanced much more than the cost of thus setting the trees. Suppose our young men try this thing, and in place of shade trees set out fruit trees in the highway fronting the homestead."

If timber trees are planted, the most valuable kinds should be selected, and such as would not injure the crops in adjoining fields. Of this kind the locust, black walnut, and butternut rank high.

Trees of the South.—Texas produces the pecan; Louisiana the cypress, which is the tree of the state; Mississippi the magnolia; Florida the live oak; Georgia and North Carolina the yellow pine. This is the tree which furnishes the world with tar and turpentine, and also with that most valuable timber, known as hard pine, or North Carolina pine. The dead wood of this tree is very full of pitch, and is known as *light wood*—one of the best materials ever seen for kindling a quick fire.

The palmetto belongs to South Carolina. It is a beautiful tree, but only useful for a few purposes. It is the finest specimen of the palm family indigenous to the United States. It possesses a great, and to this country, an increasing value. It is the only tree produced in our forests which is not attacked by the *toredo navalis*, or ship worm, and as it is incorruptible in salt water, its value for submarine purposes is almost incalculable.

It proved at the old fort, on Sullivan's Island, to possess another value. Cannon balls could not penetrate or destroy a fortification built of palmetto logs. Its leaves can be employed in the manufacture of hats, baskets, mats, and many other purposes of domestic economy.

It is called the cabbage palm, for two reasons. There is a resemblance in appearance between the cabbage stalk and the bole of the palmetto. The roots are also similar; there is also an edible substance, called the "cabbage," composed of the unexpanded embryo leaves, which may be classed among the most delicious vegetables produced on our tables. It is, however, a wasteful luxury, as the tree always perishes when deprived of this part of its foliage.

The palmetto abounds along the sea coast of

Carolina and Georgia, confined to the neighborhood of salt water; preferring damp, rich soils. Flowers in June—July.

The Aloe.—We have been shown a beautiful specimen of a fishing line made from the fibres of the so called century plant, which abounds here. It has the smoothness and lustre of silk, and great strength, and is well adapted for cordage of every description. The plant is grown upon the poorest soils, and attains an immense size. The project for introducing its cultivation for cordage is worthy of attention.

Alanthus Tree.—A correspondent of the New York Evening Post, states that the odor from this tree is poisonous to such a degree as to affect health, and in some cases to produce death. A whole family in Brooklyn were prostrated from a condition of good health to sick beds by its poisonous breath, when the season arrived for leaving the windows of their bed rooms open. They did not know what was the cause of decline, until one of their number had become a victim to its dangerous shade.

A valuable Tree.—There is a tree in Mexico called the *chijol*, a very fine wood, which, according to a writer in the National Intelligencer, (W.D. Porter,) becomes petrified after being cut, in a very few years, whether left in the open air or buried. From this timber, houses could be built that would, in a few years, become fire-proof, and last as long as those built of stone; the wood, in a green state, is easily worked; it is used in building wharves, forts, &c., and would be very good as railroad sleepers, or for plank road stringers.

A GREAT MILKER AND BUTTER COW.—Mr. Ganno, of Michigan, writes us that he has a grade shorthorn cow, got by Splendor, which took the first premium at the state fair last fall. She has given 60 and 70 pounds (or 30 to 35 quarts) of milk per day, for weeks together. This milk yielded from 2 to 2½ pounds of butter per day. She made 26 pounds of butter in ten successive days.

Mr. G. says, furthermore, that he has a three-year-old steer out of this cow, which he can sell for much more than any native steer of his age in the neighborhood. So much for imported stock.

LARGE USE OF GUANO.—Major John Jones of Wheatland, has, we understand, purchased 60 tons of best quality guano, at a cost of upwards of \$3,000, for his wheat fields this fall. He expects his next crop to reach, with ordinary luck, 12,000 bushels.—*Del. Republican.*

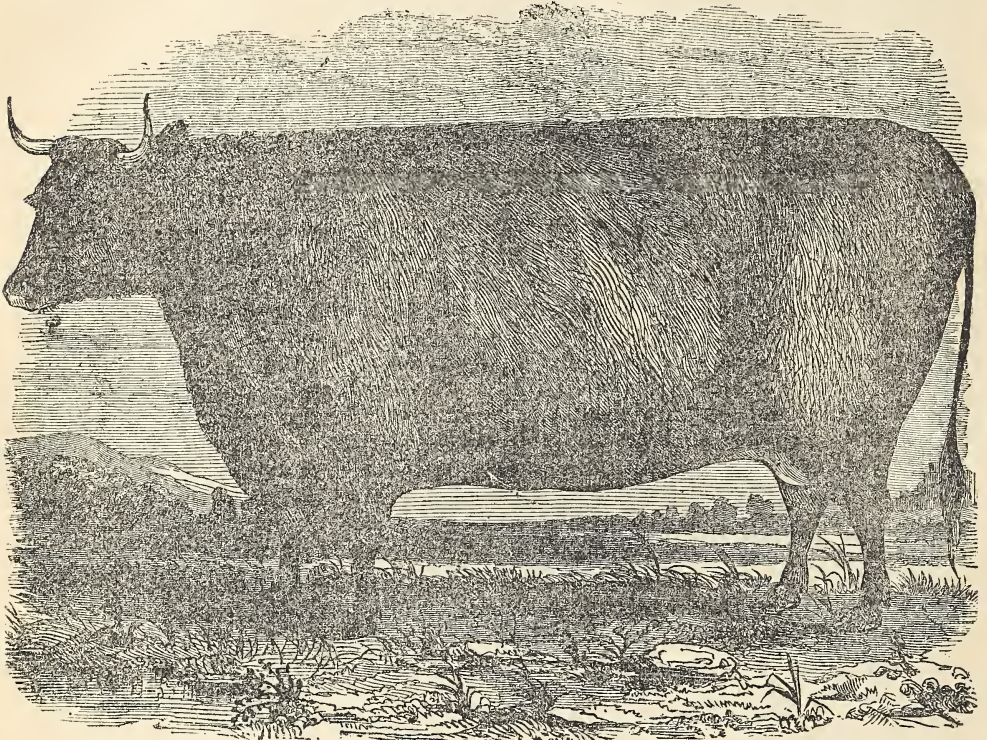
A DEVON COW.

WELL do we recollect the delight our bounding heart experienced the first time we looked at Devon cattle. We were too young and inexperienced then, to critically understand the difference between them, and native cattle; and yet, that they were infinitely superior some way, and that we had never seen anything of the ox kind before so elegant, and so apparently high bred, we could not but inwardly acknowledge. They reminded us of a troupe of Arabian horses, of a herd of deer, of the graceful, swift-

good in these respects, as the shorthorns; at the same time their dairy qualities have become inferior to no other breed of their size.

The cow below, won the first premium in her class, at the New-York State Agricultural Society's Show, at Syracuse, in September, 1849.

GRAIN AND STOCK IN MISSISSIPPI.—A spirited farmer in this state thus writes us. I intend to build a big barn soon, and what is more, fill it with grain and hay. This year I have 120 acres in corn, which will probably yield 4,000



A DEVON COW.—FIG. 64. THE PROPERTY OF AMBROSE STEVENS.

footed antelope, and the proud stag, with his high, tossing antlers. Yet, to realise such a description, the Devons must be taken in their younger days, and when rather lean than fat; and not in the staid, solid proportions of the above matronly figure. This cow, however, shows what a Devon well fed, can do, and their great superiority as a grazier's beast. Devons have been much improved in England during the past half century. Without losing anything of their fineness of limb, their briskets have been enlarged, greater breadth has been given to their loins, while the quarters have become fuller, and the twist better let down. In fact the best improved are nearly, if not quite as

bushels, 10 acres in potatoes, 30 in oats, rye, and barley, 4 in pindars, 5 in millet, and 1 in garden, thus making 170 acres in provision crops for man and beast. I only plant 130 acres in cotton. I have no idea of making cotton to pay others to raise hogs, cattle, and hay for me. I have 3 mule colts, 3 horse colts, and 7 brood mares, besides farm stocks, hogs, &c.

EFFECT OF HOGS ON SOIL.—Mr. G. kept 30 hogs in a field of nine acres during the winter, for three years. It was in corn every year, and no other manure was added. The effect was visible in the appearance of each succeeding crop, and the third year the increase yield was about one-third.

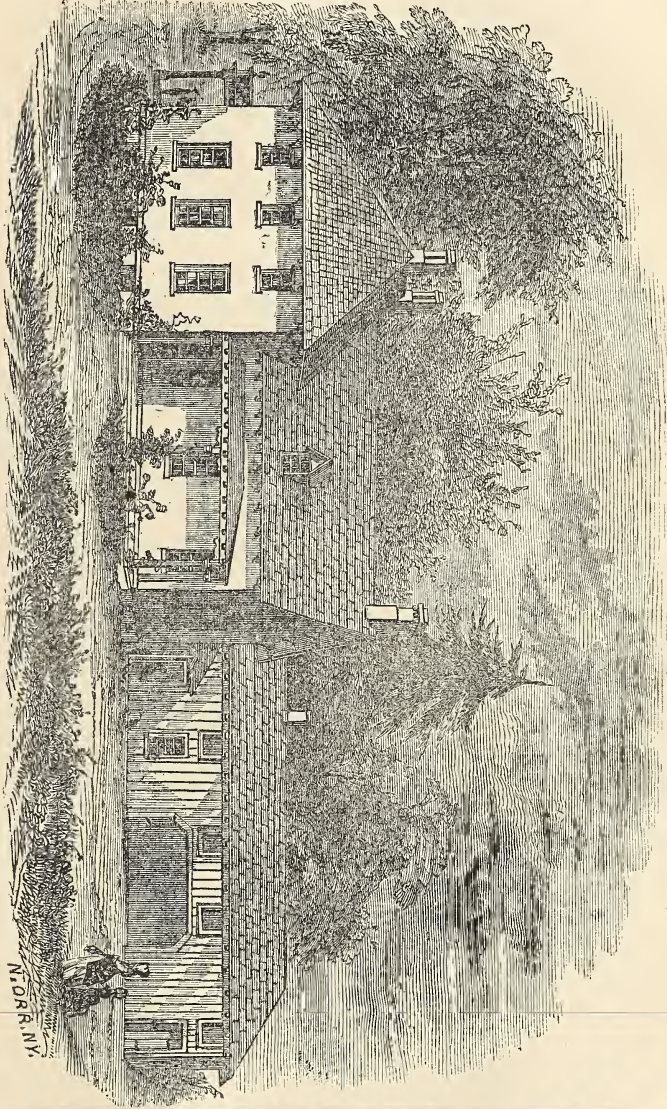
RURAL ARCHITECTURE.

THE accompanying design of a farm house, is from a work now in press, by Mr. L. F. Allen, of Black Rock, entitled "Rural Architecture." It will soon be published by C. M. Saxton, at 152 Fulton street, N. Y. Judging from what we have seen in manuscript, it will immediately

wagon houses; a piggery, poultry house, and dove cote; together with a chapter or two on general farming, improved stock, gardens, orchards, parks and lawns.

Design III.—We here present the reader with a substantial, plain, yet highly respectable stone or brick farm house of the second class,

FARM HOUSE.—FIG. 66.



take rank among the best works of the kind. The author has had great experience in rural architecture, is a man of taste, and we think his designs will prove generally acceptable to the wants and wishes of his countrymen. The work will not only contain cottages and farm houses, but barns, stables, sheds, tool, cart, and

suitable for an estate of three to five hundred acres; and accommodations for a family of a dozen or more persons. The style is mixed rural Gothic, Italian and bracketed; yet in keeping with the character of the farm, and the farmer's standing and occupation.

The main body of this house is 42 by 24 feet

on the ground, and one and three quarter stories high—the chambers running two or three feet into the roof, as choice or convenience may direct. The roof has a pitch of 30 to 40 degrees from a horizontal line, and broadly spread over the walls, say two and a half feet, showing the ends of the rafters, bracket fashion. The chimneys pass out through the peak of the roof, upon the hips of what would otherwise be the gables, connect with the long sides of the roof, covering the front and rear. On the long front is partly seen, in the perspective, a portico 16 by 10 feet—not the chief entrance front, but rather a side front, practically, which leads into a lawn or garden, as may be most desirable, and from which the best view from the house is commanded. Over this porch is a small gable running into the roof to break its monotony, in which is a door-window leading from the upper hall on to the deck of the portico. This gable has the same finish as the main roof, by brackets. The chamber windows are two thirds or three quarters the size of the lower ones; thus showing the upper story not full height, below the plates, but running two to four feet into the garret. The rear wing containing the entrance, or business front, is 24 by 32 feet, one and a half stories high, with a pitch of roof not less than 35 degrees, and spread over the walls, both at the eaves and gable, in the same proportion as the roof to the main body. In front of this is a porch or veranda, eight feet wide, with a low hipped roof. In the front and rear roofs of this wing is a dormer window to light the chambers. The gable to this wing is bold, and gives it character by the breadth of its roof over the walls, and the strong brackets by which it is supported. The chimney is thrown up strong and boldly at the point of the roof, indicating the every-day uses of the fire places below, which, although distinct and wide apart in their location on the ground floors, are drawn together in the chambers, thus showing only one escape through the roof.

The wood house in the rear of the wing has a roof of the same character, and connects with the long building in the rear, which has the same description of roof, but hipped at the end. That end over the workshop, and next the wood house, shows a bold gable like the wing of the house, and affords room and light to the lumber room over the shop, and also gives variety and relief to the otherwise too great sameness of roof appearance on the farther side of the establishment.

VALUE OF POULTRY MANURE.

It is lamentable, and disgusting even, to see what a waste is going on in this country of one of the richest and most valuable manures known. We are importing shipload after shipload of guano, (sea bird manure,) while hundreds of tons of poultry manure, which, it is asserted, is equal in value—is suffered to go to waste, in the United States. Each farmer's poultry yard produces so little that it is generally thought a matter of no importance, so it is suffered to go to waste, and thus the country loses *over a million* dollars annually! You do not believe it—we knew you would not. Yet, let us calculate—an American can always do this—and see whether we have any foundation for such an assertion.

There are 21,000,000 people in the United States. Would it be too much to suppose that one in thirty of this number kept poultry, which produced a bushel of manure per annum? This would make 700,000 bushels, weighing 60 lbs. per bushel, equivalent to 21,000 tons. The commercial value of this we will suppose equal to the best Peruvian guano, which is worth \$50 per ton, of 2,000 lbs. This would make *one million and fifty thousand* dollars. Thus our assertion is more than proved.

HOW TO SAVE POULTRY MANURE.

HAVING learned the value of poultry manure, we suppose now, our readers would like to know what is the best method to save it.

First, build you a poultry-house, if it be no more than a rough scaffolding of poles or slabs, laid upon crotches, forming a double pitch roof, with end boards in winter, to keep out the wind and driving storms. Under this place parallel roosts; the manure during the night, then, will all drop down in a narrow row beneath. Here place light loam about a foot deep, rather wider and longer than the roost, and give it a sprinkling of plaster of Paris an inch thick. When this is covered an inch deep with manure, give it a layer of loam four inches deep, and another sprinkling of an inch of plaster, and so continue. In the spring, mix all well together, keep it free from the rain, and use it at the rate of one pint to a hill of corn, or in a corresponding quantity for cucumbers, squashes, pumpkins, melons, peas, onions, strawberries, or any other fruit, vegetable, or grain, requiring rich warm manure, and our word for it, you will have a large crop of a superior quality. Thus you will become one out of the many who is desirous to benefit himself, and assist in saving more than a million of dollars annually to the country.

PORK, BACON, HAM.—No. 8.

The best and most economical Mode of Rearing, Keeping, and Fattening Pigs.—In selecting males and females to breed from, neither should be chosen less than twelve to fifteen months old; the third litter will generally be found the best for this purpose. Whether as a boar or sow, the finest of each sex only ought to be selected. By these means only will the good points of any breed be perpetuated. There is generally one small pig in every litter, called the riddling—this should never be used as an animal to breed from. For sucking pigs and porkers color is an object—these should invariably be white. For bacon hogs color is a matter of indifference, other than the fact that the black pigs appear generally to do better on the same amount of food than the white breeds. A singular reason was assigned to me for the prevalence of black-colored pigs in Essex, viz.: that the white kind was subject to eruptions of the skin of the back when put into the clover-fields, whilst the black kinds were not obnoxious to this complaint. Probably the white kind had more of the Chinese, and the other more of the Neapolitan breed. It must be remembered, also, that the old Essex breed was a black one. A sow's usual period of gestation is from sixteen to seventeen weeks. When she has arrived near the period of farrowing she will be seen collecting and carrying straws in her mouth, to form her bed. If there exists any suspicion that the sow will devour her young, as sometimes is the case, care should be taken that she is securely muzzled. All such sows should be fatted and slaughtered. The carnivorous habit here alluded to is rarely exhibited amongst the improved breeds; amongst the old sows of the rough breed this habit was somewhat prevalent, probably brought on, in many instances, through deficiency of food.

Sows should be put to the boar at such times as to avoid farrowing from the middle of October to the end of February, unless sucking pigs for the festive time of Christmas and the new year is the object; if so they should be well littered and kept warm. Whether intended for sucking pigs, porkers, or stores, skimmed butter-milk and whey, mixed with steamed potatoes, and a little barley, pea, or oatmeal, should be given in moderate quantities even when sucking; if intended for porkers, they should be kept continually fed up with this mixture. Sucking pigs should never be allowed to run about, and porkers permitted only sufficient exercise to keep them in health. Where convenient, store pigs may be allowed to pasture in clover,

giving them only a morning and evening meal in addition, or they may be allowed to root in fallows or on the dung-heap, and during winter, in the straw-yard. In fallows and rough pastures swine eagerly devour such weeds as dandelion, chickweed, sowthistle, &c.

For store pigs, exercise is necessary in order fully to develop the frame. In feeding, tranquillity is equally indispensable, a singular exemplification of which was made in the course of the experiments of the Earl of Egremont, (1777,) related in the 'Annals of Agriculture,' upon some porkers, seven of which were put up to fatten in the ordinary manner in a sty, and another of the same brood, but smaller than the others, was put into a cage one week later. All were fed alike on barley-meal. When slaughtered, the one fed in the cage exceeded in weight any of the others. The cage was made so that he could not turn round, and had only sufficient room to rise up and lie down. Whether this mode would prove advantageous on the large scale is a matter of doubt. The experiment has however been adduced by Baron Liebig as a practical evidence of the correctness of his theory respecting the formation of fat. Too much exercise is well known to retard fattening; or, to use the ordinary phrase employed by farmers, "they run all the flesh off their bones."

Where a large number of hogs are to be fattened and bred, it has been recommended that the sties should form a semicircle, the steaming apparatus, &c., being placed by the straight side. This form has many advantages. In a general way, the feeding of hogs will only form a minor adjunct to the other business of the farm, and at only few places will it be found convenient to erect new buildings for the purpose, however advantageous they might eventually prove. There are some circumstances connected with sties which should be INVARIABLY attended to: these are, that their floors should be well paved with stone, flag, or hard brick, the interior elevated half a foot above the exterior area, and a sufficient slope afforded to both, with proper drains to carry all moisture to the dung-heap. Separate sties must be kept for breeding-sows, weaning pigs, stores, and fattening pigs.

Sties should be so constructed that the swine may be fed without the feeder going amongst them; and divisions should be made in the feeding-trough, according to the number of swine, in order to prevent the strong driving away the weak; if they can be made to communicate conveniently with the straw-yard and dung-heap, all the better, particularly for stores and brood-sows.

The sties should be frequently swept and washed out, and lime-whitened at least three times during the year. The most profitable mode of feeding store pigs, is to commence by giving only inferior sort of food thrice a day, bettering the quality and increasing the quantity as the frame becomes perfectly developed.

The store or youthful period of all animals occurs when their vital and nervous energies are at the highest, which enables them to assimilate nutriment from indifferent food. Moderate exercise at the same time assists nature and aids the full development of the frame, the animal being thus gradually prepared to take on that increased amount of muscle and fat which ultimately repays the farmer for his toil and expenditure. In making choice of food for hogs there can be little doubt but potatoes, when plentiful, mixed with peas or bean-meal, is the most economical food for store pigs, and the same food mixed with Indian meal and buttermilk is the best adapted for feeding porkers. In cheese dairies, peas or bean-meal should always be mixed with the whey, in order to replace the caseous matter abstracted by the cheese. Swede turnips boiled form only an inferior substitute for potatoes, their feeding properties not being equal to carrots and parsnips; in fact, on the two latter, hogs will do well if combined with milk and a little bean or pea-meal. Oatmeal and skimmed milk is the best food for aiding sucking pigs and very small porkers of 40 to 50 lbs. weight.

The theory of the action of the various articles of food named is as follows—amylaceous or starchy food, such as potatoes, aid in sustaining the animal heat and the formation of fat, the latter property being much increased when assisted by other nutritious matters in a more concentrated form, particularly maize or Indian corn. Pea and bean-meal, from the great amount of caseous matter which they contain, should invariably form a portion of the food of growing pigs, affording, as they do, the material for forming the cellular and other tissues, in such a high degree, indeed that hogs fed on bean-meal alone are well known to form bacon disagreeably hard. Where pigs are fed without skim or buttermilk, pea or bean-meal should form an invariable part of their food. An inferior substitute for pea and bean-meal is frequently used in the shape of bran and pollard, which contain a considerable portion of the elementary substances required to develop the bones and tissues. In the present uncertainty of the potato crop, it would be hazardous to make that tuber

the basis for the calculation of the cost of producing swine's flesh: if it unfortunately eventuate that the potato, from its liability to disease, should, in a great measure cease to be cultivated to the extent that it has formerly been, the feeding of hogs will necessarily be thrown principally on milk and grain. If this should prove to be the case, barley, from the large amount of starch which it contains, will be found the best substitute for the potato; in which case, one-third by weight of barley, one-third of bran or pea-meal, and one-third Indian meal, will be found the cheapest and best mixture for growing hogs; the pea-meal to be lessened and the Indian meal increased as the hog approaches maturity.

Potatoes mixed with the above grains, form the most appropriate food for store and fattening hogs, gradually withdrawing the potatoes, and finishing the feeding with dry balls of the mixture named. For exquisitely fine pork, whether to be consumed fresh or as bacon, the hogs should be fed solely on skim and buttermilk mixed with oatmeal. The mixture of Indian corn, barley, and pea-meal forms a very close imitation of the constituents of oatmeal. It has been found very profitable to consume tares by store hogs.

Feed regularly, as abundance of food will not make up for the loss arising from irregular feeding. Pigs know their feeding time very accurately, and nothing retards their feeding so much as allowing them to be pining and weazening for their anticipated regular meal. Also mix a little salt with their food; keep the troughs and animals clean, their sties and beds dry and warm. Vary the bill of fare; in doing so, however, be careful not to lower the general standard of the diet; hogs do much better when their food is varied. Stores, brood-sows, and feeding hogs, should all be fed separately.

Hogs do better on cooked than raw food. Some instructive experiments on this point are recorded in the Highland Transactions. I have seen some hogs of the improved large Irish breed feed to very great weights on *raw potatoes alone*—the flesh good and firm; these are, however, rare instances.

When the sow is suckling, she should have extra food; oatmeal, milk, and potatoes, or pea-meal, potatoes, and milk, are the best. At the time of farrowing she should be carefully watched, and the young ones removed; the placenta, or after-birth, ought also to be removed, otherwise she will devour it, and thus engender a morbid appetite, which may eventually cause

her to devour her young. Abortion seldom takes place with the sow: the symptoms of such are similar to those of approaching parturition, but more intense. When this is likely to take place, a veterinary surgeon, if within call, should be requested to attend. As a general rule, a sow ought not to be allowed to breed after she has entered her fifth year, nor boars after the seventh.

Swine are troubled with several diseases, the most common being a species of leprosy, commonly known by the name of measles; which, and the other more serious diseases, would require a separate treatise to do justice to the subject.—*Royal Agricultural Society's Journal*.

THE above concludes the able article on pork, bacon, and ham. It is not exactly applicable to the system pursued in the United States of rearing and fattening pigs, and curing their meat; nevertheless, it contains so many excellent general hints, and is written with so much ability, that we deemed it highly worthy the attention of our readers.

REVIEW OF OCTOBER NUMBER OF THE AGRICULTURIST.

Prospectus of The Plow.—This is the title of the first article in the October number of the *Agriculturist*, followed by an article under the head of Editors' Table, which tells us that at the close of this year, *THE PLOW* will take the place of our old familiar journal, and the third officer be promoted to the command of the ship. I hope his long experience will enable him to sail the new craft safely to the end of a prosperous voyage. No one, now, can object to take passage with him on account of the fare, for it seems to me reduced below a living price. *Fifty cents a year* for a paper like the *Agriculturist*, is certainly dog cheap, and ought to insure the largest circulation ever given to an agricultural paper in America. If anybody ever reads the scribbling of your Reviewer, (you say they do,) I hope they will read this declaration. It is the duty, yes, positive duty of every reader, not only to subscribe himself for *THE PLOW*, but to procure half a dozen of his neighbors to join him. This should be done to show the publisher or proprietors of the new paper, that the public appreciate their motives in making this great reduction, which is to increase its circulation and consequent usefulness. Come then, brother farmers, let us give our old friend a benefit. Only a bushel of potatoes for a monthly visitor, while every number will be worth more to you than the cost of the whole twelve. If

the name of such a veteran writer in agricultural papers, as that of the editor of *THE PLOW*, will not take the reef out of your purse strings, the attempt need never be made again to induce farmers to read.

A Farmer's Kitchen of Old Times.—Alas, yes! old times have passed away, and what have the new times brought us instead of the happy scene so graphically described in the article now under review? In reading, I was insensibly carried back to the days of my youth; aye, and to my own sweet Mary, mother of her who now bears the name, and calls me by the endearing appellation of father; but not so dear as the appellation given me by her mother. None but one born upon the soil of New England could ever write such a history of a fire-side scene in an old-fashioned farm house.

Pork—Bacon—Ham.—No. 7.—These articles all contain more or less very crude matter, mixed up with much that is valuable. The postulate in the first sentence of the present number is of this character. The hardness or solidity of pork depends as much upon the quality as quantity of food. Pork fattened upon beech mast, is a soft, flabby substance, and exhibits the characteristics of that described by this writer, in consequence of being ill fed. He says lean pork will be too salt, and like the Westphalian hams, have to be freshened before it can be eaten. This is all an error in salting. If only just enough salt is given the meat to make it palatable, it can be preserved fully as well and will make far sweeter bacon. Six pounds of salt to a hundred pounds of bacon is ample; but it never should be put in pickle. If you will use a spoonful of sugar or molasses to each ham or shoulder, and a little pinch of saltpetre, you will not need so much salt as even the above small quantity. This writer speaks of the necessity of rubbing the salt well into the skin of the meat. If this is necessary in England, it is not so in this country. If the flesh part is well salted; I will insure the whole. I have saved hams perfectly, in that way, which weighed forty-five pounds each, and better ham never was eaten. But I certainly did not smoke them according to the directions of this writer, and I don't believe it is possible to make good hams, if his directions are followed. The best bacon in the world is made in the open, log smoke houses of Virginia, North Carolina, and other southern and western states, where the air has free circulation and the meat never feels the heat of the fire used to create the smoke.

Importation of Merino Sheep.—Far better for

Americans would it have been, if all the French Merino wool ever imported into this country had been upon the backs of the sheep producing it, instead of being first manufactured. Mr. Jewett speaks of wethers averaging 250 pounds when fattened for the butcher. Does he mean live or dead weight? [Live weight, of course.—Eds.] If they dressed that much, they were enormous. I believe the heaviest sheep butchered in this country, that I have heard of, dressed a little over 200 pounds, and that was one of the great Cotswolds.

Law of Overhanging Trees.—This is a good, and I hope will be a useful article. But there is not enough of this decision. Suppose I have an apple or pear tree, the fruit of which is very valuable, which has overhung my neighbor's land these thirty years, during all of which time, I have gone over and picked up the fruit unmolested. Have I acquired a right to continue to do so? Or suppose I have a tree only five years old, and thus have not acquired a right, and my neighbor forbids me from coming on his premises; but suppose I do, what damage can he get if he sues me? Has he any right to gather the fruit off the overhanging limbs? Have I a right to climb my tree and go out upon the limbs over his ground, and pick the fruit? These are all questions for you or your correspondents to take into consideration.

Skylarks.—I don't know so well about the injury to community of the birds of this name; but there is another kind of "skylark," which do an infinite amount of damage in their night prowlings through the farmer's orchards and watermelon patches. I don't think shooting a few of them just enough to tickle their stern a little, would do any harm.

A Pattern of a Landlord.—Glad to hear of one good pattern. Wonder if he would extend the same courtesies to your Reviewer, if he should drop in some day? [To be sure he would, and be glad of the chance.—Eds.]

Post Hole Augers.—How many of your readers ever saw one of these useful implements; much more, ever used one? How many, after seeing the cut, will buy one? About one in a hundred, and the other ninety-nine will still dig their post holes after the same tiresome, slow process of *auld lang syne*.

Shade Improves the Soil.—No doubt of it; but not to the extent that Mr. Baldwin thinks it does. If that were the case, we should need no other manure—shade alone would give all the fertility required. I believe in shade; but having seen a good deal of sunshine, I am not quite

green enough to swallow the shade theory entirely.

Birds.—A glorious article, worthy the man who penned it, and profitable to be read by all mankind and all their neighbors. Show me a man or woman who loves birds and flowers, and I will show you one with benevolence and kindness in his heart. Friend Allen is death on the crow. Old Joe, to whom I read the article, and who is nearly as black as the doomed bird, says he is afraid color has influence to prejudice the gemman's mind—that he hates your crows for the same reason that some folks hate negroes—because they are black. It is a pity people are so set against eating this bird. Is that owing also to color? Because they are not bad eating; and if only in fashion for food, they would soon be exterminated.

Poultry Raising.—No. 7.—Cock-a-doodle-doo. I have trod on the toes of some of the young brood, and the old hen is after me in a terrible flutter. These poultry writers are as belligerent as they are long winded. Offer to touch a feather of a favorite breed, original or mongrel, and there is a cackle and a crow for a fight directly. As to being henpecked, I plead not guilty. If I had a wife, however, I suppose, like nine tenths of my fellow men, I should be. I am sorry my crowing hath lost its melody to the ear of this great henologist.

Basket Willow.—It is truly surprising so little attention is paid to the cultivation of this article. I have no doubt it may be grown with a profit equal to the statement of this writer, and sufficient for the demand of this country, and perhaps, exportation, as it can be grown upon land of little value for any other purpose. There is no danger of glutting the market.

Winter Apples for the South.—If you can recommend a kind of apples which will live and do well in the south, you may make your fortune, for the demand would be greater than you could supply.

Hungarian Cattle.—I suppose you publish a cut of this ugly brute just by way of contrast, to show off the beautiful Durhams and Devons to better advantage. I hope everything coming from Hungary is not as ill favored as this specimen. [No. The men and women of Hungary are uncommonly good looking.—Eds.]

Chemistry of Milk.—I have nothing to say about the chemical part of this article, but I beg leave to correct Dr. 'Emmons' statement in regard to the location of the milk sickness, which he says "is where the spurs of the mountains shut in the level areas of the deep land coves."

Perhaps it does abound in such situations; but it abounds more where mountains are among the things heard of, but never seen by the younger portion of the community. It abounds fearfully in the central part of Illinois—in the vicinity of Vandalia, for instance. Again, along the Wabash River, and in several places in the interior of Indiana and Ohio, where there are no mountains and scarcely any hills. As to the cause of milk sickness, my opinion is, it arises from the same cause which produces fever and ague—a poisonous miasma, which affects the human system in one way and the brute in another.

Vermont Cattle Show.—Here is an article after my own heart. What you see, Messrs. Editors, to commend, receives your just meed of praise. But you will not praise everything with fulsome laudation when you know it deserves censure. I hope such plain talk will do the Vermonters some good.

American Plows in Europe.—Laughable indeed, to think self-conceited John Bull should have to come to cousin Jonathan to teach him how to make a plow. There is a great change in the old fellow's tune since he sung his jeering notes over the "solitary waste" in the Crystal Palace. What with plows, reaping machines, locks, and long, low, black-looking schooners, he has had a reef or two taken in of his overweening conceit, and no doubt will keep a more civil tongue in his head until he forgets the sting of the threshing we have given him. We can send him several other things besides plows and pistols, which would astonish his burly proportions.

Scalding Hogs.—The method described is certainly far superior to the old way of heating water in kettles, and much less troublesome than by hot stones. The only objection to it will be the expense. If a portable heater could be contrived to set into any tub or cask, and heat the water, and then remove it to another, or till wanted again, it would be a very useful article upon every farm. Mr. Harvey calls his scalding a tub, but describes it as a box, if I understand rightly. Until farmers are provided with better apparatus for heating water, I most earnestly recommend them to use hot stones, as the cheapest and easiest method within their reach.

New-York State Fair.—The same person who showed up the Vermont show, has unveiled a few of the hidden mysteries at Rochester, though far too sparing of justly-deserved censure. There are a good many things about these fairs every year, which ought to be blown

up as well as shown up; and I am glad to see your fearless remarks, so far as they go. The truth is, nearly all the papers deal in nothing but soft sawder, when speaking of the State Fair, so that a stranger does not know from the published accounts, whether it was good, bad, or indifferent.

Foreign News.—The Amende Honorable.—There is nothing like owning up when fairly cornered. But, although this is honorable, it strikes me it would have been much more so never to have published the base slander, which, being now refuted, compels the authors, very reluctantly, I have no doubt, to make the only amend in their power. And thus endeth all that I have to say of the contents of your October number.

REVIEWER.

STONE WALLS—TURNIPS—HOUSING CATTLE—DISHING COWYARDS.

This article has been some time on hand, being accidentally mislaid, or it would have had an earlier insertion. We shall leave Reviewer to defend himself in his own way.

In the June No. of the *Agriculturist*, Reviewer says:—"There is not a stone wall in New England but would be of more value to the owner, if buried beneath the surface, to drain the soil than it is above," &c.

With all deference to his experience, wisdom, and general sagacity, I think the remark is far too sweeping, not to say absurd. It is doubtless true, that on many farms, most of the small stone are best disposed of in draining low grounds; but to think of breaking stones of a ton weight and upwards, to the requisite size for draining, is hardly common sense.

There are many farms in New England that hardly need or admit of a single drain, and on which stones are so abundant as to be a burden.

Now, when the owner of one of these farms wishes to clear a piece of land to make it feasible for cultivation, shall he pile them in huge stacks, here and there, or leave them half piled, just as it happens, amongst which he dodges around as best he can; or shall he put them in straight, substantial walls as partition fences? Which would most disfigure the "landscape"? As to walls being an "eternal torment," I have known six persons tormented for want of them to one who has been troubled with them.

I have often known large *varmints* making depredations where they ought not, when a substantial stone wall would have prevented the mischief, and the frequent hard feeling consequent thereon.

I have a favorable idea of wire fences, where

other materials do not abound; but where labor is more plenty than cash, and stone more abundant than either—often requiring to be drawn scarcely two rods—I think it judicious to use the “abominable nuisances” for fence. It is true, stone walls sometimes fall by the action of the frost, but this depends much upon the skill displayed in building. On many farms the main concern must be to get something to keep soul and body together, “beautiful landscapes” being a secondary consideration.

I may be called the opposite of “hard-headed,” but the above are my views. Did “Old Joe” sanction the article from which I have quoted?

Turnips.—I wish to notice the remarks on turnips, in notes from a Kitchen Gardener’s Memorandum Book, in the April No. The writer says, for “fodder, turnips are the least valuable of all the agricultural roots, and but little prized as a culinary vegetable.” Both parts of the statement are at fault, according to my notions. Turnips may be less nutritious than most other roots, but for animals that “part the hoof and chew the cud,” they are wholesome and valuable in connection with other food. They are by no means to be despised as fodder for oxen, milch cows or sheep; and as for their being but little prized as a culinary vegetable, if I should ever have the privilege of sitting down to a “boiled dish” at the writer’s table, and the bowl of mashed and buttered turnips was wanting, I should make a dinner without it of course, though I do not at home, when I can get it. The writer of the notes considers the chief value of turnips in being a “secondary crop,” after the ground has been occupied by a more profitable growth. How much more profitable? Ground well prepared will, in a favorable season, produce 5 or 6 bushels of turnips to the square rod. Is not that sufficiently “profitable?”

Housing Cows in Summer.—Many have adopted the notion that they should be housed in all cases. Doubtless, where there is a cellar, the manure, solid and liquid, is or may be best saved in this way. But in the absence of a cellar, it is better to let them lie out. Throw the droppings into one or two piles at the sides of the yard daily, and cover them with loam.

Let the yard be overspread with loam, or other substance to absorb the urine, and let it be occasionally turned over.

Dishing Cow Yards.—An idea is generally prevalent, that cow yards should be dishing, but I think about as much is lost as gained by such yards. In powerful rains the strength of manure is washed into a large puddle in the mid-

dle, to be wafted into the atmosphere by evaporation when the weather becomes fair. I have dipped up puddles formed in low places, to prevent loss. I prefer a yard nearly as level as may be.

J. W. PILLSBURY.

Milford, N. H., July 3, 1851.

CATTLE SHOW AND FAIR OF THE AMERICAN INSTITUTE.

THE articles exhibited the present season were more select than usual, and a decided improvement in many things, particularly in the cutlery, implements for the farmers and mechanics. The horticultural department was one of the best displays we have yet seen at Castle Garden. In glass, silver plated, and other ware, we notice a higher finish and superior models.

The cattle show was more select than usual. Of the horses present, the best were of the famous Long Island trotting stock. Mr. Stevens and Mr. Hurlbut’s Devons were very fine; while Messrs. Spencer, Morris, Beck, Haight, Slate, Bathgate, and others, were conspicuous with their noble shorthorns. Messrs. Prentice, Morris, and Tiffany, were well represented in Ayrshires, more particularly the former; and Mr. Colt, as usual, was strong in the rich cream, Alderneys and his lion-like Hungarians. Of working oxen, old Connecticut sent forth a goodly number of her beautiful red cattle. Sheep of the various breeds were there, with attendant shepherd dogs. As to gruntes, the very perfect shape of the Essex black, and the white Suffolks, called forth high praise. The Berkshires looked well as usual; and the Lincolns stretched forth their long bodies and great height, to the admiration of all amateurs of large swine.

The poultry was uncommonly varied, and good in each kind; and we will at last confess to having seen there *one* short legged and good formed Shanghae hen.

Upon the whole, we think this fair of the Institute an improvement upon its predecessors; and it shows a continued progress of the arts and manufactures, stock breeding and farming, in the United States.

NATIONAL FLOWING MATCH.

THIS splendid affair came off at Bridgeport, Connecticut, early in September. P. T. Barnum, Esq., had, with great liberality offered premiums to the amount of \$200, open to the whole United States. There were twenty-nine entries. All the premiums were taken by those who used Messrs. Ruggles, Noûrse, Mason & Co’s. celebrated eagle and Deep Tiller plows.

The Sentinel and Witness says—the scene

was an interesting and exciting one. Judge Huntington delivered an address on the ground, and he was followed by some quaint and appropriate remarks from Mr. Barnum, the president of the Agricultural Society, who, after the premiums had been announced, also on the ground, invited a large number to partake of a sumptuous dinner at his beautiful residence, Iranistan, a short distance only from the plowing ground.

The above plows, we see by the papers, Chas. A. Alsop, Esq., was so kind as to send us, were equally successful at the Middletown plowing match. They have also taken more premiums in Massachusetts and elsewhere this fall, than any other plows, although they had a stronger and more numerous competition than they have yet met with.

In our May number for the current volume, we published an elaborate article with illustrations, on Messrs. Ruggles, Nourse, Mason & Co's. new improved Deep Tiller Plows for sod, stubble, flat, and lap furrows, and to this we would refer our readers for information upon this subject.

CATTLE SHOW AND FAIR OF THE NEW YORK STATE AGRICULTURAL SOCIETY FOR 1853.

If this be held in or near the city of New York, and be properly got up, we have no doubt it would net \$ 30,000 to the society, (enough to found an agricultural school, without calling upon a niggardly legislature for funds,) and be the most splendid affair ever yet known in America. This may sound like a large sum, and yet the result might come nearer to *fifty* than *thirty thousand dollars*.

In case the show be located here, it should be kept open at least ten days or a fortnight, and commence the first of September, when southern and western people are here in such large numbers. It should be advertised throughout North and South America, the West India Islands, and Europe, at least eight or nine months in advance, or a year would be still better.

And now what we want for this exhibition is, a PARK in the heart of the city of New York, like that of Hyde, Regents, or Victoria Park in London. It would be well also to have a Crystal Palace adorning it, where manufactures and arts of all kinds could be displayed, and the exhibition in this should be kept up at least six months.

What a stimulus such a show would give to improvements of all kinds in our country. Here would be a great city with steamers, ships, warehouses, and a few fine buildings, to look at, such as London and Liverpool alone could show ;

here would be a beautiful model park, (that is if the people of the city, in the meanwhile, have taste and liberality enough to get one up,) for the study of landscape, gardeners ; improved domestic stock of various kinds, with grain, vegetables and fruits for the farmer—flowers and shrubs for the ladies—manufactures of infinite variety for the artisan—and works of art for people of taste and fortune. But time and space do not permit us to dwell longer on this subject, hereafter we intend to touch upon it more at length.

Let the city of New York prepare the park ground, and build the crystal palace, and the corporation may clear *half a million of dollars* out of it, and the display of arts and manufactures ; while the State Agricultural Society may net *fifty thousand dollars* by its cattle show. And all this would serve as a stimulus to every city in the Union, great and small, to go and do as near like it as possible.

What a multitude of strangers our country would draw to it by such a liberal and enlightened course of proceeding ! What a prodigious increase it would give to its wealth ! How greatly it would advance all that is refined, elegant and useful.

DOGS FOR DRAUGHT.

In the snowy regions of the north, dogs are much used for travelling and moving light loads over the snow. In Quebec and Montreal I have seen them harnessed to a little wagon or sled, going about the streets gathering soap and ashes, or for other purposes. The St. Paul Democrat, which is itself located pretty high up in Minnesota, gave an interesting account last winter of the arrival of a dog train at that place from the Selkirk settlement, some 500 miles still farther north. This settlement is on the line between our territory and that of the British possessions. It contains about 7,000 inhabitants—French, English, Indian and mixed. Notwithstanding they are so far north, they raise large crops of barley, oats, spring wheat, potatoes, cabbages, turnips, beets, melons, onions, and all kinds of garden vegetables that grow in temperate latitudes. The corn crop is not relied upon—it is a precarious crop, though raised in every garden for table use.

They plant early in May. They usually have frosts till the first of June, and again in September. The season is long enough to fully mature the crops.

ONE of the New York fire bells weighs 21,612 pounds. It was cast by Hooper & Co., Boston

Ladies' Department.

LADY EXHIBITORS AT THE AMERICAN INSTITUTE FAIR.

THE very best specimen of barley is shown by Miss Emma R. Purse of Newark, N. J. It weighs 64 lbs. to the bushel. This lady shows some remarkably handsome potato-onions. Also, a sample of three kinds of wine in some dozen bottles, and we do not know how many other products of her farm.

Mrs. Sandford, of Sing Sing, shows a premium bushel of wheat, and Mrs. Harris, of Matteawan-point, a bag of beautiful rye.

Mrs. V. B. Robinson has a handsome lot of fruit, and several other ladies have done a noble part and showed they possess the true spirit of improving farmers. If some men were capable of such a thing, they certainly would be put to the blush by these exhibitors.

HINTS FOR HOUSEKEEPERS.

GATHERINGS.—Ribbands of any color should be washed in cold soap suds and not rinsed. Iron them wet, and they will be stiff and nice as new, except some kinds of pink and blue, which will fade. These may be dyed to look as well as ever. Dip the blue in a little cold blue ink and water, and the pink in carmine, from a pink saucer, according to directions, and they will be perfectly restored.

Marble fire places should not be washed with suds, it will, in time, destroy the polish. After the dust is wiped off, rub the spots with a nice oiled cloth, then rub dry with a soft rag.

When you rub the knobs of your doors, use a peice of paste board as large as your two hands, with a small hole large enough to just encircle the knob in the center, and a slit in the paper to let it in. This slipped on, will keep off all soil from the paint, and is a nice way of doing it.

A CHEAP, HEALTY, DELICIOUS SWEET MEAT.—Ladies do you know how to bake apples? Try this way and see what an acceptable dish you will make.—Take sour apples, those of a keen acid, and to every square tin filled with them, pour a teacupful of water and one of sugar. Bake them slowly until done. Eat them with cream and the juice which cooks from them. Nobody knows much of baking apples, who has not eaten them in this way. No quince, peach, pear nor plum preserves are equal to this simple dessert; and what adds to its value is, you can have it in the middle of winter, when summer fruits are among the things that were.

TO FATTEN POULTRY.—Ladies are all fond of fat pullets, ducks and turkeys, but do not always succeed well in their efforts at feeding them fat. Let me tell you. Shut them up in the dark—give them a little light two or three times a day, long enough to fill themselves with food, and then shut them up quite dark. Dr. Chambers in his work on corpulency, says:—Defective light is found to add much to the fattening powers of moderate diet. E. L. A. was employed in the cellars of a brewery, and, though strictly temperate, found his bulk becoming so great as to give him much alarm. He obtained a situation as clerk in the same establishment, and found the employment above ground cause a rapid reduction. He has since become a collecting-clerk, and is diminished still more.

CHARITY!—Greatest of all—the crowned queen among the virtues, the brightest handmaid of religion and love, has her abode on earth in the female heart. It is the plant, too, that groweth by cultivation, like a flower of the garden. May its roots strike deep, yet never reach a cold subsoil. May we have to say to this goddess, in the person of every lovely female in our country, let us mark the splendor of thy presence by every desolate hearth, and by every mourner's couch. Teach us to throw thy mantle of compassion over the ignorant, the erring, and the guilty. Let thy influence soften every obdurate heart, and reclaim every vicious mind.

WASHING COMPOUND.—The recipe for making this compound is often sold for considerable sums of money. Dissolve 20 lbs. of hard-soap in one gallon of lye, over a slow fire, and let it boil, stirring it frequently. Now set aside to cool and then add one quart of spirits of turpentine and one pint of strong spirits of amonia. When cold cut it into bars, and wrap closely in papers and put away for use. It is far superior to common bar soap, and will save nearly one-half the labor of washing.

FLANNEL CAKES.—To a pint of flour, three tablespoonfuls of meal, a teaspoon of salt, add buttermilk enough to mix it to the consistency of cake batter; put in one tablespoonful of lard, and an egg. The last thing, just before baking, beat in a teaspoonful of soda, *till very light*—bake quick.

THE HIGH LAWS.—Whatever may be the customs and laws of a country, women always give the tone to morals.

Foreign Agricultural News.

By the steamer Pacific, we are in receipt of our foreign journals to October 15th.

MARKETS.—*Cotton*, a slight fall, *Flour and Wheat*, a small advance.

The Mineral Theory.—Mr. Lawes and Dr. Gilbert, have shown by several years of careful experiment, that the mineral theory of Leibig, which he put forth so confidently some time since, and still adheres to so pertinaciously, is founded in error. This is confirmed by Mr. Pusey and M. Dumas.

A Small Hen.—Mr. Morton states that he has a full-grown Sebright Bantam hen that weighs only a quarter of a pound. We should like to see this bird along side of a Cochin China of fourteen pounds. The difference is certainly remarkable.

Rape.—It was my practice to grow yearly a few acres of rape for sheep feed, on land intended for wheat; it answers two purposes—first, feed for sheep, and secondly, the wheat crop is much the better for it; but it requires caution on the part of the shepherd, or the sheep will be blown. I have generally had it mown in the morning, (and sometimes sprinkled with salt,) what was intended for the sheep to feed on in the evening, but I think with every attention there is some danger in feeding off rape—if the crop is good particularly.

Popularity of Agriculture.—Never at any time or in any country has agriculture afforded a wider or more important range of subjects for discussion than it does in this, at the present moment. It is economic, social, and political; scientific, practical, moral and educational; it is talked from the castle to the cottage, from the palace to the workhouse. It is clerical and yet secular; provincial, and yet fashionable. It has become common ground, on which all men meet.—*Ag. Gazette.*

Thistles.—At this time of the year the extraordinary number of thistles in full seed, in hedgerows, might lead a novice in agriculture to imagine the plant was a favorite, and useful in the economy of the farm, instead of being one of the most mischievous weeds under the sun, each seed having wings on which it is carried over the face of the country for miles. Thus the industrious man, who cleans his land, is at the mercy of the sloven. In a day's ride sufficient seed may be seen to sow a thousand acres, only waiting for a breeze to disperse it. John Bull abused the Americans for being behind the world at the exhibition. However, brother Jonathan can teach us how to build a yacht! If our countrymen will take a lesson from the Dutch and Belgians, on the art of keeping land clean, they will be wise. Where a weed flourishes corn will grow.—*Ag. Gazette.*

Feeding Calves.—Give them what is natural, viz: sweet milk; and as they advance, provide them some additional nourishing food, of rather a solid nature, but not too strong. When properly nursed and well kept, calves get strong before winter—the severity of which they are thus enabled to withstand, more especially if

descended from stocks with plenty of hair. Ill-fed calves, on the contrary, suffer severely in winter, and often fall victims to the parsimony of their owners. An idea is entertained by some breeders, that if all their cows produce calves, they are sure to be well paid; but one good calf is better than three bad ones. Many animals which would have made good oxen, heifers, or cows, are ruined when calves; they may recover, but not when young; so that the early maturity of such animals can never be attained. Every day's neglect in properly feeding calves, retards their maturity; while every day's good feeding will tell in the animal's favor. On such a bull-breeding farm as now described, nothing but the best of food must be supplied to the calves, otherwise they will cut a poor figure when exposed for sale.—*Dickens on the Breeding of Live Stock.*

Dahlias.—Every grower of this favorite flower will have noticed that some kinds possess a great advantage over others, both by expanding their blooms earlier, and also by throwing them out on extended footstalks from the foliage, so that they may be said to hang pendulous in the air. These advantages are possessed, in a remarkable degree by the Dahlia called *Cleopatra*; and I should be much obliged by your carefully naming other kinds that possess them in an equal degree. *Cartmel*, [The following throw their blooms well up above the foliage and are of good habit. There are but few kinds so tall as *Cleopatra* grown at the present day:]

Black Prince, crimson	Mrs. Seldon, yellow
Box, scarlet	Negré, crimson
Charles Turner, crimson	Nepaulese Prince, crimson
Duke of Cambridge, lilac	Princes Radzville, white and purple
Earl of Clarendon, orange	Roundhead, buff
Essex Triumph, maroon	Royal Chancellor, claret
Fearless, lilac	Seraph, orange
John Edwards, scarlet	Sir F. Bathurst, crimson
Leda, buff	Sulphurea pallida, sulphur
Model, brown	Sir R. Peel, scarlet
Mr. Palmer, salmon	Thames Bank Hero, crimson
Mr. Seldon, lilac	
Mrs. C. Bacon blush	

Ag. Gazette.

Cultivation of Wheat.—The Rev. Mr. Smith, sowed four acres of wheat at the rate of one peck of seed per acre, in three rows of a foot apart; then he left a space of three feet for fallow, and sowed three more rows a foot apart; then another space of three feet, and so continued through the field. He hoed the wheat in the spring between the rows, and stirred each three feet space of fallow between them, with a one horse scarifier, and got nearly 45 bushels of wheat per acre, weighing 61 pounds per bushel. He applied no manure; and expects by this system, to obtain a good average crop from year to year without the aid of any fertiliser, other than the atmosphere. The second year, each three feet space between the triple rows, is sowed with wheat, and the ground occupying the triple rows of wheat the preceeding year, is left fallow, to be stirred occasionally with the scarifier. And thus he alternates from year to year, obtaining larger crops per acre than those who manure expensively under the old system.

Editors' Table.

CONTINUATION OF OUR AGRICULTURAL PAPER.—We wish all our friends, and the public to be fully assured that our agricultural paper does not propose dying with the next number. It is simply undergoing a change—being for the present merged in the *Plow*, which commences the first of January next at FIFTY CENTS a year, of the same size and number of pages as the *Agriculturist*. We only wait the development of public opinion, to commence a higher and more advanced work, of 64 or more pages monthly, at a price that will pay the expenses of publication, when we shall hope to give the American public the fullest intelligence of the improvements in agriculture. At the present moment, opinion seems to demand the cheapest possible form of publication.

TRANSACTIONS OF THE NEW-YORK STATE AGRICULTURAL SOCIETY, VOL. X, FOR 1850.—We are at last favored with this long expected work; and the first question we have to ask is, why has it not made its appearance before? Has the State printer taken the liberty of making a public job of it, and got it out as best suited his own convenience and profit? Or has the copy been kept back from him by a snail-paced preparation? If the former, we beg to say, that if it be intended in Albany to make fat jobs out of the State Agricultural Society, in any way or form, we stand ready to hold up all participants in them to the indignation of every honest farmer; if the latter, then the Executive Committee should appoint capable assistants, with liberal pay, to prepare the copy sooner. It is too much to ask this of the Corresponding Secretary; his duties are already onerous enough without it; besides, he has been absent by State appointment, some months the past season, in England, doing good service at the World's Fair. Such delay in the Transactions, is a little too much like that of the last Patent Office Report, at Washington; which, if we remember right, finally appeared about *eighteen months or two years behind time*. Verily, we thought the report had gone to the tomb of the Capulets, not to the Congressional printing office. But it is thus they do such things at Washington; yet let us be careful how we copy them in Albany, unless it be intended hereafter to hand over the State Society to corrupt politicians.

The material of this volume is generally superior to its predecessors; but why should it be marred with such inferior paper as we find in our copy from pages 31 to 49, 161 to 189, 241 to 256, 369 to 401, 609 to 625, 657 to 673, and 721 to the end of the volume. We respectfully ask, would any reputable publishing house in this State, thus issue on its own account, any work from its press? Why could not the paper be uniform throughout the volume, and equal in its texture to that of the first 32 pages, and many of the others? We can distinguish the difference in quality by merely looking at the edges of the volume before us. We do not

know who is to blame in this matter, but it is so paltry, that we can scarcely refrain from expressing our indignation at what looks like an attempt from some quarter to *shave*.

Mr Dean's address as well as Professor Norton's, on agricultural education, are excellent. We hope the farmers will peruse these attentively, and no longer consent to occupy the humble position many of them are now obliged to, for want of a better education; and in this we mean, a proper agricultural education, not that of the lawyer, doctor, divine, or writer on belles lettres. If farmer's schools, the past half century, had been one tenth part as well endowed as colleges, the benefit to the rural population of this state would have been incalculable.

The trial of plows is an elaborate report, and so far as we can judge, was conducted with great patience, and with a strictly conscientious desire on the part of the committee to arrive at right conclusions; but we differ with them entirely in their observations upon "Centre Draft," or that any one manufacturer has so great, or indeed any superiority in the application of this principle. It is merely fanciful; and had there been other plows present, which we need not mention, we are persuaded the committee would have so seen it. We can only regret with them that more of our best manufacturers had not sent their plows forward for a trial.

Reports of some of the farms and particular crops, are good, and show forcibly how greatly the acreable products of the state could be increased, if due efforts—which a higher education would command—were made in this desirable way. We intend if possible, to give a few of them in our next number.

The Jersey cow, by Col. Le Couteur is capital; and right glad are we to see the "thirty-six points of perfection" laid down with illustrations. Here is a chart to go by, which we hope will do American breeders some good; and that they will now turn to the forty points which we got up for them on short-horn cattle, in the fourth volume of the *Agriculturist*, and which Mr. L. F. Allen copied into his *American Herd Book*. And now if they will see that these, or some others—as much better as they may please to make them—are given by the Executive Committee as a guiding rule to the judges on stock, at the future cattle shows of the State Society, there will not be quite so much disappointment and grumbling at their decisions in future; nor will so many conceited men be ambitious to set themselves up as umpires of what they are too often so deplorably ignorant. By the way, that "old Jersey cow" is a *beauty*—that is a fact—and we intend to petition the obliging corresponding secretary, to allow her in contrast with the other "Beauty," to adorn the columns of our next number. So, gentle reader, please look out then for something marvellous to admire.

The various analyses of Dr. Salisbury, scattered throughout the volume, we shall have to put on our chemical spectacles and examine hereafter, when we

have more leisure than the single hour or two that we are taking for this brief article.

Now comes Mr. Delafield's survey of Seneca county. This is the gem of the work, and is nearer our idea of what an agricultural survey should be, than anything American which has met our eye. Perhaps we should have skipped over the historical part, and condensed the geological, and thus jumped at once into the more practical. But what would you call *practical*, we hear asked. Aye, indeed, what is it? Yet such long articles we are afraid will not be read by the common farmer. The ready response to this, doubtless is, then educate him to take an absorbing interest in doing so. Agreed; for that we will contend with all our hearts; and in the meanwhile tender Mr. Delafield our grateful thanks for the pleasure the perusal of his admirable article has given us.

Of some of the extracts from addresses and essays, read before the county societies, we think highly; of others, we must be excused for saying, that they are better fitted for the pages of a Ladies' Magazine, than those of the Transactions of the New York State Agricultural Society. It is time we had done with such fiddle faddle generalities, and namby pamby sentimentalities, and oratorical fourth of July-ers. Let these be contrasted with Prof. Norton's excellent address before the Seneca-County Society. See page 585.

In the name of common sense, what has that long winded prize essay of *one hundred pages* on Agricultural Dynamics, to do in the Transactions? It may be very able for aught we know—(as we shall never attempt to read it)—but an Encyclopedia is the proper place for such articles. Such abstract essays are not transactions of the society, according to our understanding of the term. Then why lumber up the volume with them? If people desire to read such things, let them consult the works published on such subjects. We say all this with a perfectly kindly feeling towards the author of the essay before us; we beg him to believe that he is not personally included in our observations, we are only condemning the *principle* of the thing.

Regeneration of the potato, and the rot, have become a regular bore to the farming public. We believe the potato rot miasmatic. Lime, charcoal, and fresh wood ashes applied to the seed at the time of planting, as often recommended in our periodical, are the best restorers of the potato.

And now for a cut at a *cut*. Did the artist intend to guillotine Ruby, with a sharp triangle, plane her body down as smooth as a board, and turn her legs into knitting needles for the use of some good farmer's wife? We thought that this stiff pare-away artistic style, had been exhausted in the earlier volumes of the Transactions. Ruby is a superb cow, in living flesh and blood, and we consequently the more regret to see her caricatured in this way. Compare this cut—for a portrait we will not call it—with that of the fat cow Grace, the Hungarian, and Jersey cattle, and see how much more natural these are.

There, gentle reader, we have done with this portly volume of Transactions, for which, no doubt, you are

very glad—and so are we; hoping that the next will appear in better time, on more uniform paper, and shorn of all that is superfluous and irrelevant. We will then do our best to commend it in toto, and send it home to the bosom of every farmer's family in the state.

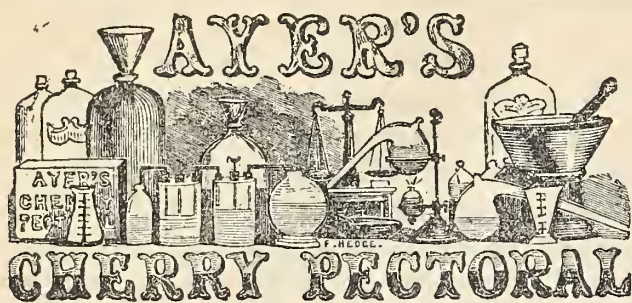
THE AMERICAN MUCK BOOK:—Treating of the nature, properties, sources, history, and operations of all the principal fertilizers and manures in common use; with directions for the preparation, preservation, and application to the soil and to crops; as combined with the leading principles of practical and scientific agriculture. By D. J. Browne. Published by C. M. Saxton, 152 Fulton street, New York. Pages 429—price one dollar.

We do not hesitate to say that this is the most complete and comprehensive work yet published in America on the subject of manures, nor do we know of its equal in Europe. Mr. Browne has been several years collecting and arranging the materials for his Muck Book, during which time he has ransacked every possible source for information on the subject of which it treats. He has quoted for his motto, the old saying, that "muck is the mother of the meal chest;" he might, with equal truth, have added another, namely—"muck is the mother of money." Muck, or in other words, any kind of fertilizer, is a farmer's mine of wealth; and he cannot be too industrious in digging up, collecting, saving, and properly applying such to his land. The more muck or manure, the better the crops; and the consumption of these, makes the muck heap again, of an increased size.

The arrangement of this Muck Book strikes us highly favorably. First, we have gaseous and imponderable manures; second, fossil, saline, and mineral manures; third, vegetable manures; fourth, animal manures; fifth, liquid manures; sixth, compost and homestead manures; seventh, special manures. All these are treated in a plain, practical, comprehensive manner, and in a style at once clear and brief. We do not know what more the farmers can desire; and if this work does not have a large sale now, we shall think they care very little for the improvement of their land, growing good crops, and filling their purse with money.

SCIENTIFIC AGRICULTURE.—We are glad to learn that the Trustees of the University of Albany announce a series of lectures the coming winter, upon scientific agriculture. Prof. Norton, of Yale College, will commence his course in the first week of January, and continue it three months. He will lecture on soils, plants, and animals. Prof. Hall will lecture on geology and mineralogy. Dr. Goodby will lecture on entomology. Some gentlemen eminently qualified, though not yet named, will teach engineering and surveying. Prof. Cook will lecture on elemental chemistry.

It is designed that all these lectures shall be eminently practical, and that the language used shall be as plain and familiar as it is possible to make it. A pamphlet is published explaining the whole series in full. For this, or further information, address Prof. John P. Norton, New Haven, Connecticut, Prof. James Hall, or B. P. Johnson, Esq., Albany, N. Y.



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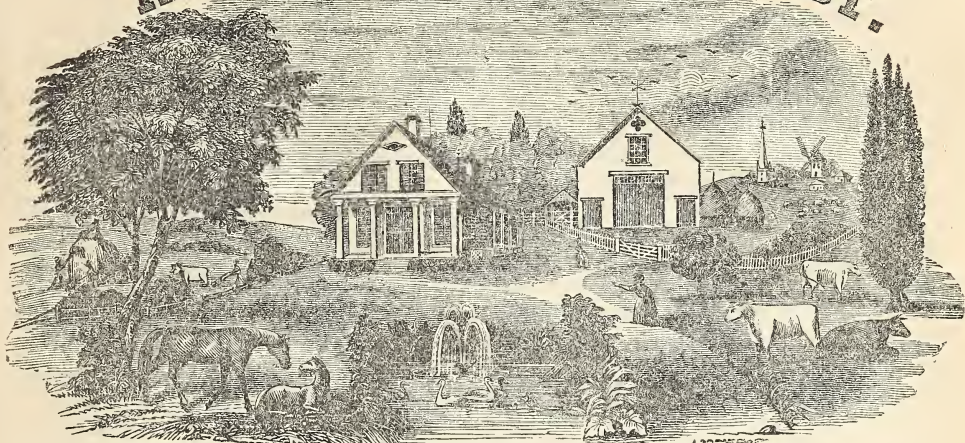
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THE EDITOR'S OFFICE is at the New York Agricultural Warehouse of A. B. Allen & Co., 189 and 191 Water street, up stairs, where he will always be happy to see his friends from country or city. Office hours, 12 to 3 o'clock, P. M.

A. B. ALLEN and R. L. ALLEN, late Editors of the *American Agriculturist*, will be regular contributors to the *Plow*; also, Professor Norton, Dr. Antisell, L. F. Allen, and others, late correspondents of the *Agriculturist*.

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TO OUR READERS.

WE cannot close this last number of our tenth volume, which terminates our editorial duties for the present, without expressing our obligations to such of our readers as have accompanied us through our ten years of editorial labor, and favored us from time to time with their counsel and correspondence. We trust that while thus engaged, they have received as well as imparted instruction of the highest utility to our agricultural interests. It has been for the advantage of our common country we have thus labored; and while we and they should consider it a duty to have contributed our mite towards advancing this great cause of improved agriculture, we should feel that it is also a privilege to do something for the benefit of our fellow beings, and most especially in that interest which lies at the very foundation of human sustenance and national prosperity.

This obligation still rests upon us, and we would that it could be rightly appreciated by all; that every intelligent farmer throughout the Union would feel it as a duty he had yet to discharge, and act fully up to that belief; and that he should contribute both by precept and example, towards enlightening his co-laborers in their responsible occupations. Then, and not till then, will the agricultural papers of this country combine that amount of interest and information which cannot fail to enlist the cordial sympathy and support of every intelligent tiller of the soil. In the mean time, we trust that every one who feels his obligations as a man and as a patriot, will sustain the agricultural press, and promote agricultural improvements by every means in his power. In addition to communicating such information as may be interesting and useful, each should not only subscribe for one or more papers, but should induce their friends and neighbors to do the same.

We have endeavored, in whatever direction our energies have been employed, to elevate the profession, elucidate and improve the practice, and meliorate the condition of American farmers. We are happy to add, there is a large and increasing aggregate of talent throughout the country, directed to these objects; but our own efforts, with those of many others combined, will fail of producing the desired results, unless they are heartily seconded by the mass of the community for whose benefit they are directed. However these efforts may be received, we shall continue to make them. We mean to sow the seed broad-cast, whether the crop comes this

year or the next, or is postponed to the far-off future. We are fully assured it must germinate hereafter, if not now. We are content that it bide its time, until genial rains and kindly sunshines nourish it into life. Others, more fortunate than we, may reap the fruits. But, however near or remote this result may be, we shall hope at least, to merit, and perhaps receive as our sole reward, the title of the **FARMER'S FRIENDS**.

VILLA OF MR. SARGENT.

AMONG the beautiful country places at which we have occasionally called, there are none superior, for its size, to Wodenethe, the villa of Henry Winthrop Sargent. It is situated on the east bank of the Hudson River, at the foot of the Beacon Mountains, a mile or more south of Fishkill Landing. The natural scenery here is unsurpassed in the United States; and Mr. Sargent, with the tasteful eye of a designer of fine landscapes, has taken every advantage of it in laying out his grounds. He commenced only about ten years ago, on a poor soil, and in the midst of a thick natural wood, covering the greater part of his domain. As much of this as was necessary for his buildings, lawn and garden, he immediately removed; and cut out such openings in the remainder, as were demanded to give him the unrivalled views of an extensive landscape, blending thick forests and wide waters, high craggy mountains and deep valleys, populous towns and a well cultivated country around.

The buildings here are elegant and spacious, and surrounded with as beautiful and well kept lawns, as it is possible to have in the arid summer climate of America. We asked Mr. Sargent how he got the turf so soft and elastic, and the herbage so thick and fine. He informed us that it was owing mainly to his *pasturing it with sheep*. This is easily accomplished without injury to the flowers or shrubbery, as they are protected by a handsome iron hurdle fence, which is easily removed from place to place, as required upon the grounds. We noticed some fine cows as well as sheep in the park. Animals of any kind improve the grass of lawns and parks; and, aside from this, are pleasing objects in the landscape. We only wonder they are not oftener found here in America. In Europe, a park is considered bare, and in a measure desolate, without them.

The great feature of Wodenethe, to the utilitarian, is its extensive gardens. The soil was originally poor; and the first step Mr. Sargent took to enrich it, was to trench the whole space

full *three feet deep*. He thus created an extensive pasture for the roots of fruit and vegetables in which to roam in search of their food; and then took good care to supply them with varied fertilizers of the proper quality and quantity. The good results of such a first preparation cannot help being noticed by the most careless visitor; for such a healthy, rapid, and abundantly producing stock as he will here find, is rarely exceeded in the best natural soils.

The Hudson valley is one of the finest regions in the United States for fruit, and of this advantage Mr. Sargent has taken good care to avail himself. Of pears he has about 180 choice varieties, apples 60, peaches the same, plums 46, nectarines 12, apricots 9, and native grapes 8, of which the best, for this climate, is the Diana, though the Isabella and Catawba flourish well.

We believe Mr. Sargent was the first to erect a grape house in the United States, with the curvilinear span roof, (covered on both sides with glass,) similar to the renowned conservatory at Chatsworth. Messrs. Howland and Van Rensselaer, eight or ten miles above, on the same side of the river, have since erected graperies of a similar shape, and very fine ones they are too. Twice the quantity of fruit can be better grown in such a conservatory than in one of the common shape. Besides the usual variety of Muscats, Muscadines, Hamburgs, &c., found in graperies, Mr. Sargent cultivates with great success, the Charlesworth Tokay, flame colored Tokay, Tottenham-Park Muscat, Cambridge Botanic Garden, Victoria, Prince Albert, (these two last are very fine,) purple damask, (immense berries,) Xeres, (the Sherry grape,) Wilmot's Black Hamburg, Malvasia, Decan's superb, (a fine white grape,) Lashmere's seedling, Bishop's, Chasselas Arbone, (very fine and high flavored,) white Bual, de la Palestine, (immense size of bunch,) Caillaba, Black Frontignan, St. Peter's of Allier, White Gascoigne, White Hamburg, (very beautiful,) parsley-leaved Ciotat, and the superb Black Damascus.

In rare ornamental shrubs and trees, we believe Wodenethe is unexampled, at least in New York. Mr. Sargent has devoted no inconsiderable amount of money, together with years of unremitting attention, to their introduction from every part of the world, where there was the remotest chance of success in acclimating them. The English evergreen shrubs, owing to the great difference in climate, he has generally abandoned, such as the hollies, laurels, laurustinus, savins, &c.; but with shrubs and trees, from our own and other countries, he has suc-

ceeded quite satisfactorily. Among these are the following.

Ash, the common weeping, the golden bark weeping, and the lentiscus leaf weeping.

Acania Horrida, with immense triple thorns.

Beech.—Purple, copper, weeping, purple weeping, cut leaved, and fern leaved.

Birch.—New weeping black, and old weeping silver.

Cherry.—Old and new weeping.

Cypress.—Deciduous.

Elm.—English, Scotch, English cork, Dutch cork, purple elm, Chichester, Cornish, Exmouth, Huntington, glabra pendula, and Scampston weeping.

Horse Chestnut.—Buckeye, yellow flowering, pink flowering, scarlet flowering, and dwarf white flowering.

Judas.—English and American.

Laburnum.—Weeping and purple.

Larch.—New weeping.

Linden.—New weeping, silver leaved, red twigged, and broad leaved.

Magnolia.—tripetala, acuminata, conspicua, soulangiana, gracilis, purpurea, macrophylla, glauca, longifolia.

Maple.—Cretan, purple leaved, scarlet, pink leaved, Norway, English cork, Tartarian.

Mountain Ash.—New weeping.

Sophora.—Weeping.

Paulownia.—

Willow.—New fountain.

EVERGREENS.—*Arbor Vitæ*.—American, Chinese, Siberian, filiformis, (weeping,) plicata, and tartarica.

Cedars.—White, red, Deodara, Cedar of Lebanon, and Japan or Cryptomeria.

Jibbs.—Smithii, Douglasii, and Menziesii.

Picea.—Cephalonica, pinsapo, webbiana, and pinea.

Pinus.—pinaster, cembra, excelsa, pumilis, ponderosa, Sabina, (tender,) Lambertiana, Gerardiana, austriacus, maretta, and maritima.

Juniperus.—Tamariscifolia, alpinus, pendula, cupressus, Bedfordiana, hibernica, recurva.

Taxus.—(yew.) English, Irish.

Taxodiopsis.—Sempervirens, horizontales.

Araucaria, brachylepis.

Among the rarer shrubs will be found the purple and prickly-leaved berberry, twelve varieties English azaleas, eight varieties English rhododendron, cotoneaster buxifolia, deutzia scabra, euonymus, variegated evergreen, forsythia viridissima.

Hawthorns.—Double white, scarlet, pink, and variegated Kosteria. Ground self tree, double flowering Japan quince, double flowering sloe, African tamarisk, French tamarisk, Weigelia rosea, zauchneria, mahonia, three varieties, purple filbert, oak-leaved hydrangea.

We are glad to notice that efforts such as Mr. Sargent has so perseveringly, (we had almost written *enthusiastically*,) bestowed in ornamenting Wodenethe, are beginning to be more highly appreciated now than formerly among us. It is to amateurs like him, that Europe is indebted for the introduction and naturalization of many a valuable shrub, tree, flower, seed and vegetable, which the people now could not well dispense with, except at great inconvenience, discomfort, and positive loss to themselves and country. For our own part, we honor all such efforts, and feel grateful for them, even when unsuccessful, or producing nothing beyond an added ornament to the grounds surrounding a country gentleman's mansion.

THE SUBSCRIPTION TO THE PLOW, the successor to the American Agriculturist, and to be conducted essentially in the same manner, is placed at so low a price, that every man who has even a kitchen garden to cultivate, to say nothing of him who farms his numerous acres, can afford to pay for it from the advantage he will derive from its perusal, and we trust our friends will give to it a full and hearty support

NEW YORK MARKETS.—No. 2.

In our March number, we took you with us upon a morning stroll through Fulton Market. We now propose to carry you to the other end of the same street, and give you a slight view of another great bazaar, where the products of many thousand farms are concentrated upon one point, by the power of wind and steam, which move great fleets of vessels and long trains of railroad cars, freighted with food to fill the mighty mass of moving life, that must be daily fed in this great city.

Your first feeling upon viewing Washington Market will be disgust at the corporate authorities of New York, for maintaining such an abomination—such a collection of old wooden sheds, as altogether go to make up, as you will suppose, a sort of temporary make-shift for a market house. Yet this make-shift policy has disgraced the city upon this spot for a quarter of a century. The ground occupied by this market is much longer than that of Fulton, and the business transacted here, will be to you utterly inconceivable. Situated as it is upon the bank of the Hudson, it is the great receiving depot of that prolific inlet of farm produce to the markets of the city and the world. This, more than any other, is a wholesale mart of provisions.

Let us step on board of the market vessels in the adjoining dock. At least a dozen large schooners from Maine and New Hampshire, loaded entirely with northern potatoes, and nearly as many more from Delaware, Maryland, Virginia and North Carolina, with cargoes of sweetones. Here are five sloop loads of turnips, and as many more of cabbages. Of apples, we might as well estimate the sands of the sea shore, as attempt an approximation towards the quantity of this fruit daily passing through this market, to say nothing of all the other avenues by which it enters into and is sold and resold, or consumed in this great fruit emporium.

Besides all these sailing vessels, you will find all along the docks contiguous to this market, numerous steamboats and tow barges, fitted up expressly for the transportation of market produce. Upon these you will count the carcasses of beef, mutton, pork, poultry, and game by the hundreds, butter and cheese by the ton. To give you some idea of the extent of trade in the former article, we will mention that a friend of ours, in the vicinity of Washington Market, whose business is that of wholesale grocer, and not generally engaged in the produce trade, informed us that the value of butter consigned to this house for sale, would amount to \$50,000 per annum.

No description, however, which we can give, will convey an idea to the mind of one who has never visited the city, of the vastness of the quantity of food daily required to feed such a multitude as constantly dwell at this great point of concentration, and that are coming to or going from it to all parts of the world.

Immense quantities of property at this season are liable to destruction from frost. Here may be seen a thousand wagon loads of potatoes, turnips, carrots, beets, onions, cabbage, and other perishable vegetables, lying upon a few boards on the ground under open sheds, without any possible protection to prevent freezing. Upon the wharves, and all around and under the market house, and on the pavements, in front of produce stores, there are hundreds of barrels of apples, also liable to be frozen in a single night, upon a change of temperature as sudden and severe as often occurs in this climate, before they could be removed to a place of safety.

The crowded condition of this market renders its want of neatness more apparent—its want of almost every convenience, comfort, and capability, has been so long apparent to all who are acquainted with it, they have ceased to wonder at, or be disgusted with its miserable appearance. Situated as it is, with a broad front upon the river, what an ornamental, as well as useful, monument of city pride might be reared here.

The basement story should be made cool and dry in summer, and proof against frost in winter. This should be the vegetable and fruit market upon the sides of the building; the rooms under the center being dark would be used as store houses, for anything requiring an even temperature, such as butter, lard, fruit, or vegetables. The first floor should be wholly occupied for meats and their kindred substances, upon roomy stalls, with broad aisles and railroad tracks between. This room should be the perfection of neatness—fitted with marble tables and Croton water; windows, and doors, wire-screened to admit air and keep out flies; lighted with gas, and kept open for evening sales—the only time laborers can find leisure to attend—and in all things made a place of attraction, instead of loathing and disgust.

But the second floor should be the greatest scene of interest. Here, in a hall of 150 feet wide and 300 feet long, should be sold all the innumerable small articles of traffic and fine fruits, and flowers and bijouterie of the vegetable world.

The floral hall should be made a place of great attraction, by the ornaments of art as

well as natural productions, and always open to every one who would bring these blessed gifts of heaven to expose for sale. Such a place would encourage the cultivation of many a waste spot, and prompt the gathering of many a wild blossom that now blooms and fades in the woods, to bring to the New York flower market; bringing with it not only comfort to those who cultivate and sell, but cheap and innocent pleasure to those who buy. A love of flowers, and a love of mischief are antagonistical to each other. Cultivate the former, and the latter will fade from the human character.

The use of the upper rooms I need not point out; except in one of them there should be a market reading-room, where the farmer in his visits to the city, for the sale of his crops could always find a much more pleasant place to spend an hour, than in the unhealthy atmosphere of some neighboring bar room.

What proud satisfaction it would be to us, as editors of an agricultural paper, if we could take our country friends—particularly the boys and girls—through such a place as we have pictured for a market house of the products grown by the toil of their constant exertions. But when we come back to the reality of those we have described, we are constrained to think them emblems of that too prevalent feeling.—Oh, anything is good enough for farmers—a feeling that will continue until farmers shall exert themselves to rise above the condition where a faulty education, or neglect to study and apply science to their pursuits of life, has placed them in the scale of society in this country.

At some future time, in our new periodical, *THE PLOW*, we will take another stroll together through some of the other New York markets, and perhaps through those of some other city.

SOLON ROBINSON.

♦♦♦
EFFECT OF DIET ON HEALTH AND OTHER MATTERS—INTERESTING LETTER FROM THE SHAKER SOCIETY OF KENTUCKY.

Amite Co., Miss., Aug. 1851.

I ENCLOSE a letter received a few days since from Mr. Bennet, a member of the Shaker Society, near Lexington, Ky. From statistics I have seen, they average the longest lived of any people in the Union; they own as fine land and as fine stock as Kentucky can show; they are very wealthy, and the society in the south part of the state is also very wealthy. They seldom have any sickness, and never had a case of cholera, notwithstanding it was all around them. They have abandoned the use of the flesh of hogs as food. If you should visit them you

would be delighted with their village. They own the finest Durham cattle I ever beheld. What you find in this letter can be relied on.

E. J. CAPEL.

Pleasant Hill, Mercer Co., Ky., June 1851.

DEAR FRIEND:—Having, in comparison with the number of occupants, an abundance of land, we are mainly employed in agricultural, horticultural, and other pursuits connected with the cultivation of the soil, the rearing of stock, particularly cattle, sheep, horses for our own use, and a few hogs. Our stock of cattle is quite large, and consists, in the main, of the thoroughbred improved shorthorn breeds. The shorthorns, in our opinion, are decidedly the best cattle ever introduced into this section of country; they are thrifty, well formed, grow large, come to maturity quick, and are unsurpassed in their milking properties. Some four or five of our thoroughbred cows are now giving daily, from 60 to 66 lbs. of rich milk, making an average of eight gallons each. These, it is admitted, are rather exceptions; but a cow that does not give six gallons, (48 lbs.) per day, during four or five months first after calving, is generally considered here, below the average. But climate and nutrition have their influence, and no doubt a race more diminutive and hardy is better adapted to your section.

Devon Cattle.—I saw your Devon bull, it is presumed, last winter at Bayou Sara, in the care of — Clauss. He is a beautiful and well formed animal, and doubtless will do well in the south—much better, with the same attention, than a Durham bull would do.

South Down, Cotswold, and Fine Woolled Sheep. Your South Downs in company with the bull were beautiful. These sheep in the south, where mutton is the principal object, can be raised with more profit than any other kinds; but with us, where wool is the leading incentive, they are considered very unprofitable—we have tried and discarded them. Our flocks consist of Saxony and fine woolled sheep, except the Bakewell and improved Cotswold, but these coarse woolled sheep are not numerous with us.

Swine.—We have but few hogs and these are of the Berkshire breed, which we most approve, after trial of various other kinds.

In our habits and manner of living we are very regular. We rise in the winter at five, and in the summer at half after four in the morning, and in the evening retire to rest at nine, or a little before, the year round. We breakfast in winter at half after six, and in summer at six; dine at twelve and sup at six, during the year.

Diet.—As articles of diet, we make no use of pork, foreign teas or coffees, simply because we believe them unwholesome; but deny ourselves no further of the good things of the table, found among the best of livers in this country. There is this difference, however, between us and our neighboring good livers, that we make a freer use of milk and butter, pastries, fruits, all kinds of vegetable alimentary substances, and a more restricted use of meats, &c., than they do. Our meats are beef, mutton, poultry, and fish—eggs we have, especially at one season of the year, in abundance. At our meals we have considerable variety in articles of diet, and these articles, except in a few instances, are continually changed, according to circumstances; so that it would be impossible, or nearly so, to give a perfect understanding of how we live in every minutia. But, generally, for breakfast we have two kinds of meat, cold light bread and warm biscuit, commonly in form of light rolls, milk, butter and cheese, domestic tea and coffee, Irish potatoes and other vegetable sauces, pies or pastry, &c. For dinner, two kinds of meat, soups, cooked vegetables, cold light bread, warm corn bread, milk, butter and cheese, puddings, pies, &c. Supper, no meat, cold light bread, domestic tea and coffee, milk, butter and cheese, potatoes and vegetable sauces, pies, preserved fruits, &c. There is not, though allowable, a very free use made of any kind of animal food, further than milk, butter and eggs, by the society at large, and many of them find it more conducive to health to restrict themselves within narrower limits.

Dyspepsia Cured.—For my own part, an abstinence from all animal diet, except milk, for the last six or seven years, has cured me of dyspepsia or indigestion, or perhaps more correctly, this course of living in connection with the water treatment, has cured me. We have never had a case of cholera or anything like it, in this place.

Pasture for Cows.—Nature has so ordered it, that a cow should have plenty of grass or other nutritious substances, so that with a few hours' labor she can supply herself for the day, and have time to lie and rest and ruminate. These conditions are known to be essential to her health and well being. Where a cow is compelled, for a scanty subsistence, to labor hard in the hot sun all day, she becomes exhausted, and without relief dies, where other circumstances are favorable.

Winter Feeding Stock.—Seven months in the year, on an average, we do not feed our milch

cows at all, grass and red clover in pastures being sufficient, but the remaining five months we feed them. The principal food in winter, besides hay, is what we call chop. Oats in the sheaf unthreshed, are cut and mixed, after wetting, with meal, and the oats should be cut in the field before they get fully ripe and allowed to cure in the sun and be taken up without being wet. Pumpkins, turnips, and boiled potatoes, (Irish,) make good food for milch cows in winter.

M. BURNETT.

FARMER SNUG AND FARMER SLACK—THE CONTRAST.

I HAVE lately made some observations upon the difference between farmers, which, with your leave, I should like to lay before your readers.

In the first place, let us examine the premises of a good farmer. His barns and out buildings are a perfect model of neatness. Not a board missing from its place on the barn, to let in the winter winds and snows; but all is warm and comfortable. His yards do not show the want of time to clear them, consequently, he does not lose one quarter of his manure—that most valuable and necessary article in all improvements in agriculture. Not only is this amount saved, but the pleasure of getting around the yards and barns is greatly facilitated, and greatly to his advantage. Examine his fences, you find no rails or boards missing—all is snug and in order. His cattle and sheep are in their places, not troubling his neighbors. Ask this man to take an agricultural paper, and nine cases out of ten he will tell you he is taking one already, but would like to renew his subscription for another year. Ask him if he could not get along without it, and he will tell you perhaps he could, but he would not as long as he could obtain one for so trifling a sum. This is the *scientific* farmer.

Now let us view the premises of the farmer Slack, and mark the difference. His barns speak out—they want now and then a board, (and oftener now than then,) to keep the contents from the snows and storms of winter. His yards show the effect of his easy habits—so much that is valuable going to waste. His fences denote the same want of care and attention. In some places only the traces of a fence are visible, so that with the utmost ease, his own cattle can go from field to field, or his neighbor's cattle partake of the herbage that his own so much require, judging from their appearance. Such is the farm of neighbor Slack—as he is termed. Ask him to take an agricultural paper and mark his answer—99 cases out of 100 him or his pro-

tototype will tell you *no*—I want none of your *book-farming*. He is contented to go on in the same routine of life his father did before him. To such I would say, of the two, give me the book farmer, for that is the kind of farming for me. Moreover, I would ask what is it that makes the difference between the two farms I have represented. One takes an agricultural journal and studies his profession, while the other does not. The contrast is drawn from facts which have lately come under my observation, and are not exaggerated.

AUGUSTUS.

Smyrna, New York.

OHIO FARMING—CLEARING LAND.

THE success of the farmer depends on a sound discriminating judgment, pointing out the proper course under the circumstances which surround him, and energy and perseverance to accomplish what he has undertaken. There is much land in Ohio which has not yet been disturbed by the woodman's axe or mattock. Much of this is covered with lofty timber, and a thick undergrowth of various kinds of bushes. The average cost of grubbing alone is not less than two dollars, and the whole cost of clearing and fencing, at least eight dollars per acre. Although I am not an old man, yet I have subdued and brought under cultivation between three and four hundred acres of forest land.

Proper time for Grubbing.—I prefer the early part of summer for grubbing; the roots remaining in the ground more quickly decay, and less labor from sprouts and suckers is experienced. The brush is piled and burnt any time through the summer. The great mass of brush and fallen timber which are necessarily burnt on the ground leave a very clean surface, but underneath a literal web of interwoven roots are found extended through the length and breadth of the field. Having arrived thus far, the question comes up—*what is the most judicious method to insure a crop of wheat on this land.* In preparing new ground, I use a strong team and heavy plows. On similar lands I have sowed on the surface and scratched over it with one horse and shovel plow—this being the only labor bestowed upon it. This method requires less than half the labor of the other process, and less than half the time; and finally, an equal if not superior crop is obtained. The succeeding spring I sow the field in timothy and clover seed, which remains in pasture about five years, by this time the roots have generally become rotten; the two horse plow can then work to good advantage, and the ground is in good condition

for a crop of any kind of grain. It is perhaps hardly necessary to remark that zone but clean porous, loamy soils are treated in this way.

The common method of preparing and seeding down older lands in this vicinity, is to plow before harvest, and just before seeding, stir the land, then sow the seed and finish with the harrow or cultivator. This method generally brings a good crop, but much labor has been expended. It is true the fallow system has its advantages, yet I am of opinion, about the same result can be obtained with less labor. Where I have clover hay I deem one plowing sufficient; I then reverse the common order; instead of sowing and following with the harrow, I prefer a thorough pulverizing the soil with the harrow, and then sow the seed, and now comes the shovel plow again, which is the last implement unless water furrows are required. If the plowing and harrowing has been thoroughly done, the inverted sod will be but little disturbed and the soil is thrown up and left in ridges. The freezing and thawing of winter breaks down and crumbles the soil, which is equal to hoeing the young plant, causing it to start early in the spring, bidding defiance to the fly, and, in due time, rewarding the husbandman with an abundant crop. For the last implement I much prefer the cultivator to the harrow, but in all sincerity, I prefer the shovel plow to either. It raises the ridges a little higher and leaves the ground considerably rougher than any cultivator with which I am acquainted. But I will not further trespass on your columns.

G.

Moore's Salt Works, Ohio, 1851.

HUMBUGS AND IMPOSITIONS OF THE DAY.—No. 2.

Spanish and French Merino Sheep.—No introduction of any domestic animal whatever, has been more serviceable to the U. S. than that of fine-wooled sheep, and those munificent men, from Chancellor Livingston, Col. Humphreys, on through the course of years to Messrs. Collins and Taintor, whose liberal and large souled forecast, regardless of cost and results, have risked their money and labor in bringing them into the country, are entitled to their country's gratitude. If they have been paid for their outlays in the sale of their sheep, it is but what was justly due them in a business view of their enterprises. But were that not so, those who have shared the benefits of their labor and solicitude, would not be particularly unhappy on such account. Still these animals took, and do still take among our farmers, because *they paid*; and like the Morgan horses, for the past dozen years.

various kinds of these "improved" sheep have been in demand. Within that time more "paular" merinos have been sold—"the pure descendants of Consul Jarvis' flock"—ten to one, than he ever bred, or could have been bred from all he ever owned; and he professes not to have bred a pure one for twenty years past—but, be it observed that Consul Jarvis did not thus sell them. And so of any or all other varieties which the market demanded.

Then, as the last grand crown of all came the Rambouillet, and other importations of the French merinos. These, too, soon found their way into Vermont; and from these *originals*, there soon spawned out flocks as numerous as those of Jacob from the stock of Laban. The first grand "show" of them was made at Syracuse, in 1849, and noble animals they were. But such a marvellous power have these sheep also to procreate their kind, that, obedient to the demand, and grateful to their proprietors for the price, their fecundity became second only to that of the vermin at Carrier's tavern, in one of the plays of Shakspeare. During the autumn of 1850, at every cattle show extending from Vermont to Kentucky, they, "the pure blood French merinos, of the most recent importation," were shown in scores; while at every landing or stopping place, to the utmost limits of the far west, "lots" of them and their crosses, with the "pure Paulars," were to be seen stowed away in pastures, at storage, for selling after the shows were over; and what is equally remarkable, the flocks from which these sheep were produced had all been sold out *clear and entire* the year before! Verily, Vermont is a prolific country! But Jonathan's gullibility is as wide as Sam Slick's invention, and no doubt the Slicks will have a "good drive" for another year or two.

Devon Cattle.—Then again, the Devon cattle, beautiful red animals, and as useful as they are beautiful, were brought into the country. Taking the fancy of our breeders and farmers, they came into demand. Possessed of one or two of pure blood, the jockeys soon exhibited herds of plump, sleek, red colors—"pure Devons," of course—and from that day, some years ago, to this, our cattle shows swarm with these *Devon* calves with black, brown and streaked noses, so entirely characteristic of pure Devons! These are exhibited and sold—"premium stock" too—at fifty to a hundred dollars each, and bound to Canada, Michigan, and the far west and south!

Of course the purchasers of these spawn, read the Agricultural papers! They are good judges of cattle; animal physiologists as well, and pay

great attention to pedigree and the character of the men they deal with! This last remark, I confess, is sheer irony. It is an unwelcome subject I admit; but as one of the chroniclers of the time, I feel bound to show up some of the impositions of the day, whether it might benefit the public or not. At some future time I may resume the subject. VERMONT.

AN OLD-FASHIONED NEW ENGLAND FARM-HOUSE.

IN our last number I gave you an insight into the farmer's kitchen. Now let us walk out in the balmy air of the following morning and look at the exterior of this happy abode.

It is only one story, but the gambrel roof gives ample space in the chamber for lodging-rooms. It is 32 by 48 feet on the ground, with a projection at one end for a dairy room—an important point never lost sight of by a thriving farmer.



FARM HOUSE.—FIG. 66.

In front there are two rooms, each 16 by 18 feet, with a front door opening into an entry between, behind which, and occupying about twelve feet square, stands the huge stone chimney, right in the center of the house. The kitchen is 16 by 24 feet, with a fire place of most ample dimensions. At one end is a bed room and pantry, at the other the chamber and cellar stairs, a bedroom and long entry to the end door, or one of common entrance. The well is within a rod of the back kitchen door, and the garden a few rods beyond.

About forty feet from the end door is the remains of the great wood-pile of last winter; for in those good old times, every New England farmer made it a point to get up wood enough in sledding time to last through the year. Two of the boys are hard at work before breakfast, preparing oven-wood. Another is feeding the hogs, and the fourth has gone after the oxen to have them ready to start into the field as soon as breakfast is over. The hired men are in the

orchard saving time by saving a few winter apples. The girls, two of them are getting breakfast, and the others are in the cow yard.

Now let us accompany *father*, who is almost as fond of his cows as his girls, and take a look at them. Certainly they are a beautiful herd, all red, with fine Devon points, gentle and good milkers. Two sides of the yard are fenced with a very high stone wall, and the other two by the barn and long shed, capable of sheltering forty or fifty head of cattle. The center of the yard is a basin, which is kept constantly filled with muck, sods, weeds, and all sorts of trash capable of making manure, or saving it by absorption.

A New England Barn.—Now let us look into the most important building upon every farm. It is 40 by 60 feet and 18 feet high. This door opens into a stable 40 feet long and 14 wide, provided with stanchions, which hold the heads of the cows in winter; each one of which is so trained as to know her place, and walk up to it as orderly as the well trained horse, which occupies a box at one end of the stable. Two great folding doors open upon both sides of the barn, so that a load of hay can be driven in from either side, and the empty cart pass out at the other. Over the stable is a tight floor, upon which there is a great mow of rye, and on the other side is the bay, filled with hay and oats from ground to peak. Old Zeph, a neighboring negro, is just clearing off the barn floor to commence the seemingly endless task of beating out all that grain with a flail. But he will do it, and then winnow in the wind, and carry it upon his back to the bins in the carriage and corn houses. And such is a picture of New England farming in old times. SOLON ROBINSON.

DIRECTIONS FOR CUTTING TIMBER IN THE SOUTH.

The following extract is from a letter of Judge Capell of Mississippi, which has been some time on hand, waiting for an insertion entire.

In speaking of one of his neighbors, who is an old experienced wagon maker, he says, "he is one of the most particular men about his work, and always cuts his timber trees during winter. He selects them of a young and vigorous growth, with *healthy* looking tops, the limbs inclining upwards, instead of horizontal. The best he finds in the pine woods on the little creeks, where the soil is rich and has considerable sand in it. For spokes, he cuts trees about eighteen inches in diameter or smaller; and always selects timber of a young, thrifty growth, with a coarse grain; the heavier the better, as fine grain and porous wood is always *brash*, and light. He prefers

trees for felloes that grow on the sides of hills. Such timber does not *crack* so much. The most important point is to have the timber got out immediately after cutting the trees; have it chopped, split or sawed into proper sized pieces, and laid in the shop to season. In making a wagon, he has the timber dressed out, (after lying in the shop for a year,) one or two months before putting together, as oak timber will shrink every time it is dressed. He uses for hubs the best post oak, and red elm, selected from thrifty trees, clear of any rot or sap, and turns and bores them immediately, and lays them away till seasoned; they crack very little in drying, (the finest hubs I ever saw were of his make.) Mr. Gray, a gentleman of experience, says, the timber here is much tougher and better than in Pennsylvania. I believe this information is worth a year's subscription to the *Agriculturist*, to any man who feels interested in getting out wagon timber.

E. J. CAPELL.

Amite County, Miss.

FARMING IN CALIFORNIA.

In a letter just received from Mr. Tyler of Sacramento, he informs us that thousands of tons of hay and wild oats have been secured the past season, so that forage is likely to be plenty at the mines and elsewhere in California. During winter they hope to obtain \$90 to \$130 per ton for it. At harvest time they paid laborers from \$75 to \$150 per month.

Everything in the way of vegetables sells by the pound. Potatoes are worth 5 to 5½ cents per pound, and grow from one to five pounds weight. Beets 5 to 7 cents per pound, and one grown there the past summer weighed *forty-six* pounds. Cabbages, 8 to 10 cents per pound, a head of one of which measured forty-one inches in circumference. Onions, 20 to 25 cents per pound, turnips 6 cents, tomatoes 10 to 15 cents; of the size of these last nothing is said, so that our readers may imagine them as large as they please—say, as big as a quart pot, up to a round half-bushel.

The land on the Sacramento is very fertile, and no matter where you plant, things are certain to grow if you will only irrigate the land; but directly after a rain is the best time. Melon-vines may be seen with ripe fruit and blossoms at the same time.

The climate of Sacramento is very fine. The absence of rain during the summer is not so great a drawback as one would suppose, as the nights are quite cool, and considerable dew falls.

Mrs. Farnham of La Libertad, near Monterey, has sent us some California wheat, a fair sample

of a crop of twenty-five acres. Some of the heads of this wheat are seven inches long, and the grains are much larger than any we ever saw grow on the Atlantic coast. If our readers are skeptical on this one point, they can call at our office and see for themselves.

Mr. John M. Horner, from Monmouth county, New-Jersey, arrived in California in August 1846, and settled at San Jose Mission, in the valley of Santa Clara. Mr. Tyler sends us the following five years results of his farming—but recollect in these calculations, that he now grows two or three crops a year.

First year, I farmed sixty acres in various kinds of produce, but gathered nothing but dear experience.

Second year, I was thrown into confusion on account of the gold mines. Laborers could not be hired at any price, and I am credibly informed, that the Governor himself had to cook his own meals. I farmed but very little, and finally I caught the gold fever and went to the mines; and there I caught the fever and ague, and returned to my farm. I gathered nothing the second year.

Third year, I made further preparations for farming. I was determined not to be disappointed, but farm I would. I could not hire hands for \$16 per day. I tried to enter into co-partnership, but could not effect it; all had rather go to the mines. None of my brothers were yet in the country. But I would not be disappointed. I got the assistance of three Indians, and we went to the mountains, twenty-five miles distant, and there we worked at the red-wood (cedars of Lebanon, for some of them are 300 feet high,) until we got rails and posts sufficient to secure fifteen acres, which I planted principally in potatoes. The produce gathered was worth about \$16,000; but unfortunately I lost one half, on account of heavy rains setting in, and the scarcity of help. Thus ended the third year.

Fourth year. My younger brother arrived in January. We managed to fence some 400 acres and farm 150, principally in potatoes; and our crops yielded about as follows:

Potatoes...	1,760,000 lbs.	Pumpkins...	80,000 lbs.
Onions....	40,000 "	Barley.....	20,000 "
Tomatoes..	50,000 "	Wheat.....	40,000 "
Beets.....	6,000 "	Chickens...	100
Solid head-		Eggs.....	300 doz.
ed cabbages	60,000 "		

Fifth year, 1851. We have fenced about 1,300 acres, and have farmed 800. We want no

rain until December, and we will be sure to gather, of

Potatoes....	120,000 bush.	Solid-headed	
Onions	6,000 "	cabbages	108,000
Table beets.	4,000 "	Chickens.	600
Turnips....	1,000 "	Eggs.....	1,200 doz.
Carrots	1,000 "	Onion seed	800 lbs.
Tomatoes ..	1,200 "	Beet.....	200 "
Barley	5,000 "	Cab'ge "	100 "
Pumpkins ..	30 tons.		

To most of the Eastern world who are unacquainted with our soil and climate, the above account will look almost impossible. But, considering that we have nine months out of twelve in which we can sow, and nine in which we can gather, it is not doubtful. And if there ever was a country in which the "plowman overtook the reaper," California is that one. A large amount of produce will be raised in California this year for market. This valley alone will yield about

600,000 bush.	Potatoes,	6,000 bush.	Pears,
32,000 "	Onions,	1,400 "	Apples,
10,200 "	Table Beets,	400 tons	Pumpkins,
5,000 "	Tomatoes,	195 "	Grapes,
100,000 "	Barley,	3,000 "	Hay,
15,000 "	Wheat,	550,000	Solid head-
			ed Cabbages.

Besides the above there will be a great quantity of beans, peas, melons, and finer garden sauce; and some 4,000 sheep and hogs, besides cattle almost as numerous as the acres of land over which they feed. This valley, if its resources were fully developed, would supply more than a million of population. I write from a knowledge of the facts, having spent five years in the valley. There are 600,000 acres of good tillable land within its borders. The poorest will yield 2,000 pounds of wheat or barley, and the best 70,000 pounds of onions, per acre.

Notwithstanding the present prices of labor, which are about \$70 per month, my calculations, based upon experimental knowledge, are such as to warrant me in stating that California can supply her own market in beef, pork, flour, barley, and all kinds of vegetables, as cheap, and of a better quality, than she can be supplied from any quarter of the world. Vegetables will be very cheap this year. After the first of August, 1852, California will supply her own market with barley; but when she can supply herself with flour, is doubtful, as there are no mills in the country, and farmers will not raise wheat without some prospect of a market."

PRICES OF WHEAT AND FLOUR.

We are asked if the prices of wheat and flour are likely to rule as low as they now do throughout the year. We think not, for the following reasons:

1st. Corn has been a failure almost entirely, in what is called the transition or middle country of the south, owing to the excessive drought; and it is not a large crop anywhere, except at the west.

2d. Potatoes have rotted badly; and turnips and other root crops, owing also to the drought, have suffered severely.

3d. Pasture in many places has been so short since August, that much corn has been cut up, and hay given out to the cattle for fodder.

Now when hay, vegetables, and corn are scarce and high, much more wheat, and particularly shorts and bran, will be consumed than ordinarily. Wheat and flour must consequently be in greater demand. We have heard of wheat being ground up already, in considerable quantities, with corn, oats, and other grain, for provender for cattle.

The crop of wheat has been large this year in America, and generally the same throughout Europe. Notwithstanding this, Great Britain will want a good deal; and the consumption at home will be more, depend upon it, than is now anticipated. On the whole, we think wheat and flour is destined to gradually advance through the winter, and that next spring they will be higher than now—still, we may be disappointed in so agreeable an anticipation for the benefit of the farmer.

WINTER MANAGEMENT OF STOCK.

In this cold latitude, where farmers are compelled to keep their stock for five or six months in a year, on food which has been laid up in store, during the season of grazing, it is a consideration worthy of their first attention, to know how, or by what means they may avail themselves of the greatest possible benefit to their stock, from the fodder designed for the use of winter; or, in other words, how they may keep their stock in the most thrifty condition on a given amount of fodder. There are, doubtless, scores of farmers who make little or no reckoning of the growth of their stock, during the months of winter; and therefore, to all appearance, think it is a matter of indifference whether they receive an adequate allowance of food, or are protected from the pinching cold and pelting storms. Pecuniary interest would seem to prompt to a proper investigation of this subject, and to an adoption of the wisest and

most profitable system of management; but humanity, alone, demands that we pursue the course which will secure the greatest amount of comfort, and the largest compensation, as a reward for the time and expense of wintering stock.

By taking a proper view of this subject, three things are particularly worthy of consideration.

First: A supply of good fodder, adequate to the amount of stock to be kept during the foddering season.

Second: Comfortable protection from the cold and storms of winter.

Third: System and regularity in feeding.

1. The period of time "between grass and hay," has ever been acknowledged as the most trying for stock of all kinds. It is a time when, if particular vigilance is not exercised by the judicious husbandman, his stock will be seen to fall away in flesh. This period arrives, in the same latitude, earlier or later in the season, according to the mildness of the weather, the fall of snow, and the abundance of herbage. This is the most proper time for every farmer to make an estimate, whether he is in possession of an abundance of fodder, for the maintenance of his present stock, during the foddering season.

When it is perceived that cattle obtain an inadequate supply of food from the pasture, they should be yarded, or put in their stalls, during the frosty nights, and fed a little hay, cut corn-stalks, or pumpkins. And I consider it the wisest management, not to suffer them to go into the fields, in the morning until after the frost has disappeared; because, while the frost is on the grass they will eat little or none, and will destroy more grass by stepping on it, while it is frozen, than they can consume in half a day. But few farmers are aware of the necessity of commencing to fodder until after the supply in the form of pasture is entirely cut off. Cattle of any kind, taken from herbage and confined to dry fodder, suffer amazingly, on account of the change which the digestive organs must undergo in order to prepare themselves for the discharge of their respective functions: The change should be gradual; and then there need be no apprehensions of injury to the animal. If there has been an exuberance of herbage, in order to keep up the same thrifty condition on fodder, not a little effort will be necessary on the part of the husbandman, to pamper the appetite, by feeding a variety of food. Cattle and horses, as well as the human species, are extremely fond of a variety of food.

Sheep are more so than any other domestic animal. Animals of all kinds thrive better, and fatten faster, when they have access to several kinds of food than when they are confined to only one sort.

Of this fact, we should take the advantage in foddering; and by a judicious admixture of different kinds, induce stock to eat much of a given kind of fodder, which, if fed alone, would be entirely refused. Sheep and cattle would doubtless thrive well on good hay; but they do much better if a portion of straw is allowed them, in connection with the hay.

I never confine my stock for more than one day, to one kind of food, after the foddering season has fairly commenced. When my cattle are brought into winter quarters, I commence threshing my grain, and thresh but a few hundred bundles at a time. A part of the straw is passed through a straw cutter, and mixed with cut hay, chaff, cut corn stalks, and moistened with water. This precipitates any disagreeable dust which may exist among it, and prepares it for the reception of meal, or shorts, which will adhere more evenly to the mass by being wet, as it is incorporated with a fork. A heap of bushel of this preparation constitutes a breakfast for an ox or cow. When they are turned from their stalls into the yard, they have access to good fresh straw during the day, of which they will eat a great amount. When I feed whole hay, straw is mixed with it in the proportion of one pound of straw to two or three of hay. This is a more expeditious mode of feeding, but not so economical. I feed but little whole hay; because, I consider that it requires enough less of cut fodder, for the maintenance of an animal, to remunerate one for the expense of keeping a machine in order, and time occupied in cutting. But, cutting damaged fodder will by no means make it good; although a vast amount of hay that is coarse and unpalatable while whole, by a little preparation, may be rendered eatable. As cold produces a voracious appetite, the poorest part of fodder should be reserved for the coldest weather; and care should be taken to increase the quantity of food as the quality deteriorates. It is bad policy to confine young cattle or sheep, during the severest weather, as is the practice of some farmers, to straw alone, and then feed them something else when the weather moderates; because, the substances found in straw are not sufficient to supply the waste of the bodily parts of the animal; and it is impossible for them to derive what is absolutely necessary for their

subsistence from the atmosphere which surrounds them. They cannot live on air any more than they can survive long without it.

2. In connection with an abundance of food, comfortable protection from the pelting storms of winter should not be overlooked. Some farmers are inclined to think that cattle and sheep have thick coats of hair and wool, and a tough skin for a protection; but they hate cold and wet storms as much as a cat dislikes a wet floor. Perhaps stock experience as much injury in consequence of the cold and stormy nights in the fall, as during the winter; for then, their systems are not so thoroughly prepared to resist the cold as they are after the cold weather has really commenced. It cannot be denied but that stock would keep in good condition without any protection during the winter; but comfortably protected from the cold storms, they will subsist on a much smaller allowance of food. Warmth is indispensably requisite to the thrift and comfort of any animal. The heat of the body must be kept up, or incalculable injury follows. All animals depend on the food taken into the stomach, to supply them with heat; and if comfortably protected, much of the food which is appropriated for this purpose would go to form flesh, bone, and muscle. Animal heat is sustained in the same manner that the flame of a fire is supported; that is, by the union of two elementary substances, oxygen and carbon, which are the principal supporters of combustion. The source from whence horses, cattle, &c. derive carbon, is the fodder which they consume; which, after undergoing mastication and digestion, is carried by the blood to the lungs, where, by the act of respiration, it is united with a portion of the oxygen of the atmosphere, and by this union, heat is generated. Now it is evident from this fact, that the blood of an animal must be furnished with a new supply of carbon from time to time, either from the fat and muscle secreted in the system, or from the food consumed. Should there be a deficiency of carbon in the daily allowance of an animal's food, such deficiency must be made up from a waste of the organised parts of the body. Exposing animals to a low temperature dissipates this heat; and if the situation is a bleak one, heat is dissipated with increased rapidity. When the bodies of animals are wet with rain and snow, evaporation is constantly going on, by which process, much more of the heat of the body is evolved than when the body is dry; and if the wind blows upon them, evaporation is more rapid; and consequently, a

greater degree of cold is the result. But if animals are protected from wind and storms, more heat is retained for their comfort; and the demand for fuel, through the medium of food, to keep up this heat, is not so great; and thus, less fodder is required. Whatever tends to make animals comfortable, tends to make them increase in weight. When animals have comfortable stalls or sheds, well littered with straw, as they should be, where they may lie down without the fear of being routed, and pass the night in rumination and quiet rest, they will subsist on a much smaller allowance of food than when they are compelled to lie down on the cold snow.

The stalls of my cattle, as long as the foddering season continues, are well supplied with an abundance of straw as often as the night returns; and this I consider a source of profit, not only by imparting comfort to my animals, but by absorbing the liquid manure.

3. Regularity in giving animals their daily allowance of food, is a consideration worthy of more notice than many are wont to suppose. All the works of nature are characterised by the greatest regularity. The appetite of all animals that are regularly fed, calls regularly for food to satisfy it. Whenever the process of digestion is complete, and the organs have had their required rest, it is necessary that an adequate supply be furnished. Interruption of this regularity causes derangement and disorder. By going beyond the usual time for foddering, animals many times swallow their food so greedily that digestion is not so perfect as it would have been had the food been taken at the proper time. And, on the contrary, sufficient time should elapse after the morning meal has been taken, for the appetite to return, before another portion is dealt out to them; else, much of it will be wasted, or rendered unpalatable, by their selecting the best part, and breathing on the rest.

It is as important that this branch of farming should be performed systematically, as any other, and far more so than many others; for success in this depends, in a great measure, on the most judicious manner in which fodder is mingled, prepared, and fed to animals. Any one can keep cattle well and fat during the winter season, if an abundance of grain and fodder is allowed. But he who keeps his stock during the winter, on the least food, and in the best condition, has unquestionably adopted the wisest and most economical system of converting the productions of the farm into the ne-

cessary articles of barter between man and man.

S. EDWARDS TODD.

Lake Ridge, Tompkins Co. N. Y.

As this article came too late for our July number, we concluded to put it over until November, when it would be seasonable.

THE TRAVELLER.—No. 9.

I LEFT Athens upon one of those beautiful days of March, which awakens all nature, animate and inanimate, to the loveliness of spring. I must say I parted with many whose acquaintance I had formed during the few days I spent at Athens, as though they were old and long known friends. Designing to visit Lexington, my worthy host, Captain Wray, set me down from his carriage at the dépôt, after dinner, and I went down to the station, which is about three miles from the village; but fortune favored me in finding the carriage of Governor Gilmer and his excellent lady, with whom I took a seat to their large, and, of course, hospitable mansion and little farm, immediately adjoining the town.

Lexington, Ga.—This is an old town with a look that does not give the lie to its antiquity. It is the seat of justice of Oglethorpe county, once considered one of the best cotton growing counties in the state. But forty or fifty years of hard skinning, will bring the hide off of anything that ever fell into the hands of such hard taskers of the fertility of soil as these cotton-growing, land-destroying people. However, there have been made within the last year or two, some of the best kind of crops, upon the very spots heretofore neglected as worn out.

Ex-Governor Gilmer.—I spent a pleasant day or two with this intelligent, social specimen of southern hospitality, embodied in an intelligent gentleman, alive to the spirit and necessity of agricultural improvement. One of the favorite amusements of this gentleman has been to collect a large quantity of rare minerals, principally from the hills and mountains of Georgia. His rooms and grounds are full of matter to instruct and interest visitors, and his library is stored with a great collection of valuable works. But he has not forgotten the improvement of the soil. Here I found a field of fine grass, and a barn in which to store the hay and feed the stock. He has fully demonstrated that grass will grow in Georgia. One remarkable feature in the farming operations of Governor Gilmer is, he never grew a bale of cotton.

How to Grow Cabbage.—His plan is worthy of note. He sows the seed about the first of April,

and lets it grow in the bed, long, spindling plants, until the last of July or first of August, and then sets them out in deep-dug holes, well manured, when the ground is wet, covering up all the stalk except the bud, and then he is sure to have good heads for winter. The holes should be dug and well-rotted manure laid by them, so all will become soaking wet, in a shower, when the manure is hauled in with some dirt, and the roots of the plant placed on it just so high that the bud will be even with the top of the surrounding earth after the hole is filled with the soil, or other rich dirt.

Price of Land.—Mr. Shackleford, an intelligent lawyer of this place, who takes an interest in agricultural matters, says the average value of farming land in Oglethorpe county, is about \$8 an acre. The common selling price is \$10—the soil generally, sandy loam—rocks, granite and quartz—timber, principally oak, with hickory, pine, &c. The surface is not so uneven as it is around Athens, but still, is quite rolling.

Governor Gilmer is satisfied by the experiments which he has made, that clover and grass can be successfully cultivated in this part of the state, if it were not that cotton absorbs everything else. There is not sufficient corn and meat made for the consumption of the county. Pork and flour are both imported. Wheat is grown to a small extent, and yields, sometimes, fifteen to twenty bushels to the acre; though on an average, not more than five or six. Governor Gilmer's method of saving seed wheat, is to let a portion of the field stand until so fully ripe there is no immature seed, and then by lightly threshing, the very best is obtained.

Appropriate Border for Garden Walks.—Governor Gilmer has made use of specimens of native quartz rock, and it has only to be seen, to be appreciated above the long rows of dull-colored brick usually appropriated to that purpose.

The Cradle Rock.—Upon the Governor's farm there is a rock of perhaps a hundred tons, so nicely poised that it can be cradled by the hand of a child.

March 23d, upon which I left Lexington, was a lovely spring day, and on my way down the railroad, with such vast tracts of old worn and wasted fields on each side, I was forcibly struck with a remark made by a stranger—"What a country this would now be if it had not been destroyed by bad cultivation."

Washington, Ga.—Having a desire to visit this place, I went down by the midnight train, 20 miles from Union Point, to Cumming Station,

and spent the balance of the night in just such a tavern as unfortunately abounds all over the country, and then proceeded by stage 18 miles, to that ancient town and seat of justice of Wilkes county. Of all the land in sight of the road, the traveller could have truly said, what a country, if it had not been wantonly and wickedly destroyed. There are a great many fine gardens in this place, well filled with excellent fruit, and ornamental shrubbery. Mr. Cleveland, an enterprising merchant and gentleman of taste, has done more, probably, than any other individual, to introduce an extensive assortment of valuable fruit. He succeeds in saving his apricots and plums from the ravages of the curculio by planting trees in hen yards, or setting coops under them at the proper time. Suitable as all this county is to produce fine fruit, there is a criminal neglect, upon the part of the planters, that they do not plant orchards sufficient to feed themselves and all their people.

SOLON ROBINSON.

NOTES FROM A KITCHEN GARDENER'S MEMORANDUM BOOK.—No. 5.

Endive.—Of late, this plant is more extensively cultivated, and meets with ready sale in our markets. It makes an excellent salad, and it is said that its root when ground and mixed with coffee, greatly improves the flavor of that popular beverage. Before being suitable for the table, it should be blanched, and with this exception, its cultivation requires but little attention. Grown in drills, and thinned out to the distance of twelve inches apart, its handsomely fringed leaves appear to advantage; and by those who are fond of variety, it is considered an acquisition to the garden.

Melons.—To have this choice fruit in perfection, it should, like all natives of tropical climates, be brought to ripen during hot weather; to effect which it is best to forward the plants in a moderate hot bed. If the seed is sown early in April, and the plants put out about the first of June, they will fruit much earlier than if the planting be delayed until the usual time the ground is in condition for planting in the spring. Another advantage to be gained is, by keeping the plants in frames until the rough leaves are formed, they are safe from the attack of insects; and the cultivator is not subjected to the inconvenience of loss of seed and time, which frequently occurs in consequence of the plants being cut off in the early stage of their growth, by late frosts, the seed rotting in cold wet weather, or the plants subsequently destroyed by the depredations of the notoriously destruc-

tive yellow bug. Pieces of sod six to eight inches square, placed grass side downwards, and the seed planted in the earthy part, will answer as well as pots.

Celery, requiring a long time to germinate the seed, should be sown as early in spring as the ground can be brought in condition, and the plants, when about three inches high, be thinned to the distance of six inches, and kept in a growing condition; and if transplanted in moist ground before putting out into trenches, they will be stouter and more thrifty. Ground on which early peas are grown, being clean in time for putting out celery, I always use in preference for such purpose. The trenches should be turned up a spade deep, and four feet wide, with the view of having a sufficient supply of earth for blanching, which should only be done during dry weather, and at intervals, as the plants, (which should be twelve inches apart,) increase in size. In manuring, recent manure must be avoided. Select that which has passed through fermentation. The older the better; and let it be thoroughly incorporated with the soil. Unfermented manure will cause the plants to rot; and too large a quantity of any description is apt to produce the same result. I have derived great benefit from hog manure, and prize it highly in the cultivation of this plant. In Scotland, I am informed that the red-solid is most generally grown. With us, the white is more popular. The turnip-rooted, or celariac, is but little used in the United States. In France and Germany it is cultivated freely, chiefly for the value of its root, which, in form, resembles a turnip. The stalk has a delicate and peculiarly sweet flavor, and being fond of variety I cultivate a few. It can be grown on level ground, but does better in trenches. It requires the same treatment as the other varieties.

Cauliflower.—Plants raised from seed sown in September, should be put out in rich ground, as early in spring as the weather will permit. Those who are not provided with hand glasses to protect them during frosty nights, and cold rainy weather, had better keep them growing in pots until the risk of such exposure is past, when they can be turned out without checking their growth. The chief cause of disappointment in producing early cauliflowers is, that the plants are not sufficiently forward before the approach of hot weather, which stunts their growth, and prevents their flowering. In order to avoid failure, they should be started early in autumn, and carefully attended to during win-

ter. Those who are not provided with suitable conveniences for wintering the plants, had better not attempt it, as they can be procured in spring from those who raise them for sale. Seed sown about the tenth of May, and plants put out in the early part of July, will, if properly attended, flower in October, and are not only less troublesome, but are more likely to succeed than those raised for early table use. But it ought to be the aim of the cultivator, to have this choice vegetable one of the early as well as late productions of the garden.

Broccoli.—The purple cape being best adapted to our climate, is the variety generally cultivated. The seed should be sown about the middle of May, and the plants put out the latter part of July, to flower in October. If put out earlier, and the heads form during hot weather, they soon shoot up and blossom, thus rendering them unfit for the table. When a small quantity only is required for private use, it is best to raise the plants in pots. They can then be put out without retarding their growth, and you are not subjected to the inconvenience of covering to protect them from the sun while taking root, or delay while waiting for cloudy weather; and by putting them out at proper intervals, a supply, in an ordinary season, can be obtained during October and November. Being an excellent substitute for cauliflower, and more likely to succeed, I grow it more freely, and rarely fail of having an abundant supply. In this climate, the flowering broccoli is more uncertain; and though well to attempt a few for variety, it is not safe to depend upon it for the main supply. Like cauliflowers, the varieties of this species of brassica require rich soil, and in other respects, similar treatment. Broccoli and onions I raise on the same ground, by putting out the plants as if the ground was unoccupied, and before they spread to any important extent, the onions are ready to be taken off.

CAUSE OF INCREASED FERTILITY FROM BURNING CLAY LANDS.

THE practice of roasting clay lands, by paring, and then charring the turf by a smouldering fire, for which the roots of the grass and other vegetable matters afford ample materials, when once ignited by the addition of a small quantity of fuel, is often resorted to in Europe, with great advantage. Besides the benefits which ensue from the destruction of myriads of noxious insects, and the mechanical alteration of the particles composing the soil, there are two most important chemical results.

The burnt or charred clay absorbs ammonia

freely from the atmosphere, which is one of the most important materials for crops. But the main benefit is the conversion of potash and soda in the soil, and especially the former, from an insoluble to a soluble condition. Clays often contain large proportions of feldspar, mica, porphyry, and trap, all of which abound in potash. So, also, do granite and gneiss from the considerable proportions of mica and feldspar they contain. All these ingredients are broken up by moderate calcination, and yield potash freely when again diluted by copious rains.

OHIO STATE CATTLE SHOW.

On the evening of the 22d September, we left Buffalo in the steamer Buckeye State, to attend the cattle show and fair of the Ohio State Agricultural Society, at Columbus. Arriving at Cleveland at eight o'clock the next morning, the managers of the railroad politely waived the conditions of their half price rule, in forwarding passengers to the fair in extra cars, and permitted us to take the express train to Columbus, and back on the same terms.

Arriving at Columbus in the evening at a late hour, caused by the delay of an overloaded train, and the consequent irregularity upon a new and yet hardly organized arrangement of travel, we found that the executive committee of the Board had provided us rooms, through the attentive notice of Dr. Warder, of Cincinnati, who was with us the previous week at Rochester. We found Columbus full to overflowing; and all its public houses thronged, as well as private hospitality taxed to its utmost, in providing quarters for the multitude in attendance.

The next morning we proceeded to the show grounds. They were located in Franklinton, a mile west of the city, on the national road, and on the extensive farm of M. L. Sullivan, Esq., president of the society. They occupied a fine elevation, shaded by a grand old grove of natural forest trees. The plan and execution of the grounds were perfect—the best we ever saw, embracing broad avenues and foot-walks, fenced off in separate divisions, with abundant sheds, yards, and stalls for the shelter and convenience of stock, and ample buildings and tents for the display of all the variety of articles intended for exhibition.

Every facility was given us on the part of Mr. Sullivan, the president, Dr. Wells, Gov. Trimble, Mr. Spinger, and other gentlemen of the State Board, Mr. Medary the treasurer, and Mr. Gest, the efficient and accomplished secretary, and other gentlemen connected with them, in

obtaining all the information desired in every department of the exhibition; nor did they fail to give us full employment in appropriating our services on the viewing committees in several branches of domestic stock.

The show, as a whole, was good, and highly creditable to this second effort of the society, and a striking improvement on that of last year, held at Cincinnati. The exhibition of short-horn cattle was truly magnificent, although in refinement of quality and high breeding in their animals, not equal to some of ours at Rochester. Of Herefords, there was but one thorough-bred animal, and this one not superior. Of Devons, but a few, and those of a recent New-York importation—a breed, like the Herefords, not yet popular in that *corn-fed* region, and probably destined not to be, until their advocates shall spiritedly drive their herds into a tested competition with the now thoroughly established merits of the shorthorns. Of thorough-bred Ayrshires and Alderneys, there were none, that we saw. Of natives, none! a most convincing evidence that the improved breeds of cattle are the only ones that find favor with the public in a contested cattle show.

The superb imported bull of Messrs. Sherwood and Stevens, Earl Seaham, was there, and by the great attention that he drew, and the liberal offers which his owners received to have him remain in Ohio, he proved the consideration with which their valuable importations are regarded in the west, as well as in our own state.

The display of horse stock was numerous and respectable, but of a different style, in general, from that mostly prized in New York. In the large and valuable stock of asses and mules, which forms so important an item of the productive agriculture of central and southern Ohio, we were disappointed in finding so few on exhibition; but those few were good, and said to be but fair specimens of the stock of the country at large.

The swine were numerous, and generally good; chiefly of the larger grades, and of no distinct breed.

The sheep were few, as compared with our own; but some good specimens of Merino, Saxon, Southdown, and long-wooled varieties were exhibited.

Of poultry, any quantity of the *fancy* were on the ground. Shanghaes, Malays, Cochins-Chinas, *Et id omne genus*, with heads as high as a crane's, and legs as big as a walking stick, were there, about the merits of which it may be supposed each spectator formed his own opinion.

One feature of the exhibition was peculiarly striking. On receiving the awards of the viewing committees, and the distribution of the prize flags, the several prize animals, consisting of 30 yoke of oxen, the bulls, cows, fat cattle, steers, heifers, and calves, were ranged in procession, accompanied and led by their owners. To these were added the prize horses; and in the rear, were brought up the mules, jackasses, and jennies, in most solemn and vociferous array. The first was imposing and grand, and were viewed in silent admiration, while the last produced, in their quaint and grotesque profile, a universal burst of merriment and waggers from the thousands of bystanders and spectators—a mixed display of admiration, fun, and drollery, that nothing but a procession of beautiful domestic stock, closed up by an array of jackasses, would produce. This procession moved around the entire grounds in the chief avenue, and in effect, was certainly an improvement on anything we had yet witnessed at a cattle show.

The display in the machines, manufactures, and the miscellaneous halls, was quite respectable, and in many things, much taste and ingenuity were exhibited. Numerous articles of farm machinery were from our own state. Some beautiful fabrications of household skill, from Kentucky, as well as Ohio, all of them creditable to the industry of the fair hands who made them. The show of grains was good. The fruits were chiefly from the lake region, and our own state, the first crop of interior Ohio having been cut off by a killing frost soon after it had set. A choice display of wine from Cincinnati, was exhibited, the counterpart of that we had at Rochester. No doubt the hills of Ohio are destined to furnish immense quantities of wine for future American consumption.

The refreshment hall, a most important department in the recollection of hungry officers, guests, and viewing committees, was filled with Ohio's best cheer, all abundant and welcome, a capital feature in an affair of this sort. The usual attendance of great, as well as little men, were there, and served to swell the mass and give variety to the occasion. The general good order and sobriety usual at all our shows was observed, no instance of a breach of either being witnessed. The amount of money received by the society was large—about \$8,000. The price of single tickets was 25 cents, just double the price of our own society; the Buckeyes apparently grudging their quarters for such an object, as little as a less sum. Ohio is

on the high road of improvement—a great, patriotic, rich state, with agricultural resources almost boundless; and with proper attention on the part of her people, destined to become one of the wealthiest, most happy, and prosperous in the Union.

A VISITOR.

APPLES AND OTHER FRUIT IN NORTHERN LATITUDES.

WE noticed, when passing through Bethlehem, N. H., an elevated cone of land between the Franconia and White Mountains, in the early part of September last, that severe frosts had arrested the further growth of the apples. Numerous trees were covered with them, which had not then attained more than half their growth, and were consequently worthless. This waste of natural and artificial effort to produce fruit, might have been saved by the exercise of only just sense enough to have selected early maturing varieties.

It is not the latitude, simply, that determines the character of the seasons. Elevation equally affects the temperature. Valleys occupying a high northern latitude, if composed of a light, dry, kindly soil, and surrounded by hills that concentrate the sun's rays like a series of focal mirrors, and protect them from the cold blasts, may often mature fruits, grain, and other crops from the accumulated heat, when more elevated regions, though adjoining, are incapable of bringing similar products within weeks of maturity. These are considerations that reflecting men will heed—but the thoughtless, never. The consequence justly resulting, will be gain to the considerate, and loss to the inconsiderate farmer.

ROOT PRUNING.

THE following notice of the practical method and effects of root pruning was forwarded to us by our agent, Mr. Sherman, some time since, but has been crowded out by other, though perhaps not more important matter. We shall be much obliged to Mr. Williamson, if he will give us the result of further experiments in this line, or any other of fruit culture:—

In March last, I learned from Mr. T. H. Williamson, of Elizabethtown, New Jersey, that he had made some successful experiments in root pruning, which, if made public, I think may be the means of improving the conditions of orchards, particularly those that are old and declining.

Dig a trench some five or six feet from the body, sufficiently deep to expose to view the main roots, and then cut them off smoothly.

with a compost made of muck, or mud taken from a river, chip manure, slacked shell lime, cinders from a wood furnace, a small portion of salt or brine; fill the trench, applying sufficient earth to prevent evaporation. In the spring scrape the rough bark from the trees, and thoroughly wash them in soft soap suds, and repeat the operation once or more during the spring.

By this mode of treatment he had restored to a bearing condition a sickly pear tree that had ceased bearing, the product of which, last year, was so abundant that it became necessary to pluck a part of the fruit early, in order that the remainder might attain to a full size.

Mr. Williamson is making further experiments in agriculture, the result of which will be forwarded to the *Agriculturist* in due season.

Trumbull, Ct.

A. SHERMAN.

REVIEW OF THE NOVEMBER NUMBER OF THE AGRICULTURIST.

I HAVE only time to glance hastily over two or three articles, and make a few short observations and bring my labors to a close with your volume.

Country Houses on the Hudson River.—If you can write down those ugly "two-story pillars in front" of most of the houses which disfigure, instead of adorn the banks of the Hudson, you will be entitled to the thanks of all who admire rural scenery, with appropriate architecture.

Important to Western Farmers.—So it is, but not one in ten will read, and not one in ten of those who do, will heed. Such is the perverse nature of human nature.

Boys Make a Sad Mistake, &c.—So they do, and the reason is, because those who are more manly set them such unmanly examples.

Phipps' Improved Wire Fence.—Something worth notice, I believe, from the description.

Cure for Founder.—The short of a long story is, give a horse the ague, and you will cure the fever—of the founder.

Cultivate Fruit.—A more truthful article never was penned; and yet it ought to make us blush to think how true it is that this country is so poorly supplied with this necessary of life.

Wheat in Georgia.—There is a deal of matter for reflection in this short article.

Cow Milkers—Churns.—I have just as little faith in this patent milking machine as you have, but I do like the looks of that big dog at work making butter. It seems as if he was of some use in the world, and that is more than most of the race are.

Rural Architecture.—This country needs a work of this kind more than any other that can be published. I hope the one noticed as forthcoming will fill that want. I think in the main, it will. But I hope notwithstanding the few errors in style, which the work may contain, it will be found a very useful one; but I am fearful it is not written in that plain simple language, required to meet the ordinary understanding of the rural population of America, and which they had a right to expect from a plain farmer, such as the author professes to be.

Stone Walls, &c.—I am pretty severely keelhauled for running afoul of the stone walls of New England. I have no time now to fire my reserved broadside, or I would sink the whole fleet of them deep into the earth in every place requiring an underdrain, and then appeal to owners if I had not made a profitable cruise for them. It is a subject which will bear a good many hard knocks, and if we can bring forth a single spark of light, let us knock away, and as we say when running afoul of each other, let the hardest fend off.

(And now, Messrs. Editors and readers, after a long and prosperous voyage, our good ship has hauled into port, where she is destined to lie a while, awaiting new fittings and fresh orders. In the mean time, a new craft is to take her place, on board of which I am generously invited by its master to take a free passage; but this, for the present, I must decline, as I intend to devote all my energies, to carry out some long intended improvements on my farm. However, I expect the new craft will occasionally pass along our shore, and as she does, I intend to keep close watch of her with my spy glass, and perhaps now and then I may jump on board and take a pull at the ropes, especially when it turns out squally weather. I had long ago determined to give up to some younger, and perhaps, more able pen, the task of reviewing each number of the *Agriculturist*, but have never been able to find a suitable point to wind up at, until the present. If in aught I have said, I have given offence, I pray forgiveness. If I have instructed, amused or interested the readers of the *Agriculturist*, I rejoice to think my labors have not been entirely lost. I may, perhaps, occasionally make my appearance in *THE PLOW*, but will give no promise; neither can I promise ever to be known to you by any other title than "the captain," or your REVIEWER.)

THE better animals can be fed, and the more comfortable they are kept, the more profitable.

MICHIGAN.

ALTHOUGH the first settlement of Michigan by white men, (the Canadian French,) took place in the year 1701; yet it was not until about the year 1836 or '37 that the American population, to any extent, began to take possession of this territory. Previous to this time, the idea prevailed in the east, that this beautiful state consisted of little more than marshes, lakes, and impenetrable swampy forests; an impression which was industriously promulgated by the fur traders, whose interest it was to exclude an agricultural population. The then existing inhabitants were scattered along the coast and small streams, subsisting by hunting, fishing, and raising a little coarse produce, the implements and modes of farming being such as were used in France, two centuries ago. It is not thirty years since that cattle were fastened to the plow by the horns; and even yet, that strange implement, *Le Diable*, may be found threshing, in some old French barns. [*Le Diable*, or devil, consists of a heavy piece of timber about three feet long, stuck full of pieces of wood, like the spokes of a wheel, and forming, when complete, a cone; the spokes lengthening in each row. The smaller end was fastened with a swivel to the floor, and ponies being attached to the larger end, it is dragged round on the straw and grain.]

Detroit, as a military trading post, was the only place which could rise to the dignity of a large village. The first steamboat which arrived in Michigan, Aug. 27, 1818, was the *Walk in the Water*, and to the genius of Fulton, and De Witt Clinton, this state may be said to owe all its present importance; the New York canals and railroads being as necessary to us as to the people who originated them. The peninsula has evidently at a comparatively late period been submerged. Along the shores, especially in the southern portion, extends a belt of low, swampy, heavy-timbered land, almost undrainable, stretching about thirty miles into the interior. Here the soil is a heavy blue or yellow clay, lying on an impervious subsoil, with limestone occasionally appearing. It will probably be many generations before this tract is generally settled; but in the mean time, it is supplying large quantities of excellent timber and staves, for ship building and exportation. The white oak, black walnut, hickory and pine, cannot be surpassed in quality, while all other indigenous trees abound. There is one exception to this general character, in a large island called Grosse Isle, commencing at the mouth of the

Detroit River, and running northward some ten miles. Here the land is of the finest quality; it is well drained by natural swales; and the timber, which is heavy, is of such extraordinary hardness and soundness as to be everywhere sought after, by those who require such peculiarities; and the cord wood bears, in the Detroit market, a much higher price than any other. After passing this low belt, the face of the country entirely changes. The land becomes rolling and dry; the soil, except along the rivers, sandy, loamy, or gravelly, full of carbonate of lime; beautiful lakes and dry marshes, producing an excellent hay, diversify the scene, and the trees stand far apart, without underbrush, among fine blue-grass pastures. The sparseness of the timber is probably more owing to the Indian habit of annually burning the woods, than to nature; for where fires are not allowed to spread, young oaks appear with the utmost density of growth. No country in the world could be more beautiful than was Michigan some fourteen years ago, when settlements had scarcely commenced, and when in the spring the ground was a carpet of gorgeous flowers. To these two peculiarities—thinness of forest, and unfailing natural meadows—the rapid and prosperous early settlement of the state may be attributed. In the western part, there are a few prairies of great richness, but none of any great extent. The useful minerals abound. Besides limestone, iron ore, bituminous coal, gypsum, marl, and salt springs are sufficiently plentiful; and in the central part of the state, quarries of sandstone are worked, of good quality for grindstones. The copper and iron ores of Lake Superior are well known; and, as soon as the canal round the Sault St. Marie is finished, must be sources of incalculable wealth.

The population contains a smaller proportion of foreigners, than perhaps that of any other western state. This arose chiefly from the government lands being brought into market in the speculating times of 1835 and '37, when most of what was good was taken up on speculation by non-residents. A rather higher price at the time, was the consequence, which forced the foreign emigration round the lake; still, during the last four years some large and highly respectable bodies of Germans and Hollanders, having taken up lands and colonized themselves, are bringing in their friends and acquaintances. The mass of the population have come from Vermont, Connecticut, New Hampshire, and New York; and the characteristic

energy of these people, is everywhere visible in the beautiful villages, fine barns, country houses, numerous churches and school houses which attract the attention of the visitor on every side. In no western state have more liberal and efficient arrangements been made for education, in proportion to the population, than are to be found in the State University, the branches in connection with it, and the public school system. A railroad, equal in construction to any in the United States, runs from Detroit to New Buffalo, on Lake Michigan, connecting with northern Indiana; and another through the southern tier of counties, will be finished from Monroe and Toledo to Chicago within one year. So far, Michigan has been eminently a wheat-producing state, the soil and climate being peculiarly adapted for this grain. Within the last five years, much attention, however, has been turned towards sheep, cattle and horses; and the exports of wool, and the two latter classes of produce are rapidly becoming of great importance. The mildness of the climate fits this state beyond any other, for the growth of wool; and those who have gone largely into the business, have found it very profitable. On the eastern coast, many years pass without requiring above a month's winter feeding of sheep, where the fall pastures are good, and sometimes not even this, snow, to any depth, being uncommon, and rarely continuing on the ground but a few days at a time, while really cold weather does not generally set in until after the January thaw.

From the last statistical report of the secretary of state for the years 1848 and '49, the following particulars are drawn. The returns are from 31 counties, and are generally complete—the city of Detroit, however, being omitted, owing to the census being taken at a different time from the rest of the state.

Number of acres improved,	1,437,459½
“ “ sown with wheat,	465,900½
Bushels of wheat raised,	4,739,299
“ all other grains,	8,179,767
Pounds of wool clipped,	1,645,756
“ sugar made,	1,774,368
Number of horses,	52,305
“ neat cattle,	210,268
“ swine,	152,541
“ sheep, (1850, doubled),	610,563
“ flouring mills,	228
“ runs of stone in do.,	568
“ barrels of flour made,	719,478
“ saw mills,	730
“ feet of lumber sawed,	167,179,257
Value of merchandise imported,	\$4,660,974

In the year 1840, the state contained only 99,618 sheep, with a clip of 153,375 pounds of wool, and the wheat raised was a little over 2,000,000 of bushels.

Michigan has seen some hard times, and has had much to struggle with; but at present, everything is prosperous. This year's crops have been large and of fine quality, the only complaint being of lowness of price; but our farmers are generally out of debt, and forehanded. The good returns of the wool crop enable them to hold on to their wheat, and everything is going ahead as fast as we can well keep up with it.

C. F.

Michigan, Dec. 13, 1850.

ANALYSIS OF SOILS.

I SEND enclosed, a copy of the analysis of surface and subsoil, made by Dr. Antisell.

SURFACE SOIL.

Quartz, Sand, and insoluble Silicate of Iron and Lime,	83.30
Alumina and Peroxide of Iron,	4.50
Lime,	1.65
Magnesia,	.21
Soda,	.12
Potass,	faint trace
Chlorine,	.120
Sulphuric Acid,	.08
Phosphoric Acid,	—
Carbon Acid,	—
Moisture,	4.70
Organic Matter,	4.24
	100.00

SUBSOIL.

Sand and insoluble Silicates,	90.30
Alumina and Peroxide of Iron,	5.50
Lime,	.70
Magnesia,	.26
Soda,	.15
Potass,	—
Chlorine,	.21
Sulphuric Acid,	.14
Phosphoric Acid,	—
Carbonic Acid,	—
Moisture,	2.27
Organic Matter,	.46
	99.99

R. LINSLEY.

West Meriden, Conn. Nov. 1, 1851.

We are glad to see our agriculturists giving their attention to the analysis of their soils. The benefit that will result from this critical examination into the sources of the food for their crops, and the means necessary to yield them, at all times, a full supply, cannot fail to be attended with great and lasting advantage to the interest which they represent.

PROFITABLE FARMING.—A farmer near Bastrop, Texas, with the aid of three hands, has raised the past season, 6,000 bushels of corn, which he can sell at \$1 a bushel. The crop averaged 60 bushels to the acre. So says the Texas Register. We say we don't believe it.

Ladies' Department.

HINTS—GATHERINGS.

If your flat irons are rough, or smoky, lay a little fine salt on a flat surface, and rub them well; it will prevent them from sticking to anything starched, and make them smooth.

Rub your griddle with fine salt before you grease it, and your cake will not stick. When walnuts have been kept until the meat is too much dried to be good, let them stand in milk and water eight hours, and dry them, and they will be fresh as when new.

It is a good plan to keep your different kinds of pieces, tape, thread, &c., in separate bags, and there is no time lost then in looking for them.

The water in flower pots should be changed every day in summer, or it will become offensive and unhealthy, even if there is salt in them.

Hops should be picked when they are full grown and begin to be fragrant; by no means let them remain longer, as a strong wind or rain will injure them greatly. Spread them a while to dry.

Oat straw is best for the filling of beds, and it is well to change it as often as once a year.

Cedar chests are best to keep flannels, for cloth moths are never found in them. Red cedar chips are good to keep in drawers, wardrobes, closets, trunks, &c., to keep out moths.

When cloths have acquired an unpleasant odor by being from the air, charcoal, laid in the folds, will soon remove it.

If black dresses have been stained, boil a handful of fig leaves in a quart of water, and reduce it to a pint. A sponge dipped in this liquid and rubbed upon them, will entirely remove stains from crapes, bombazines, &c.

In laying up furs for summer, lay a tallow candle in or near them, and danger from worms will be obviated.

WALNUT KETCHUP.

TAKE half a bushel of green walnuts, before the shell is formed, and grind them in a crab mill, or beat them in a marble mortar; then squeeze out the juice through a coarse cloth, and wring the cloth well to get all the juice out, and to every gallon of juice, put a quart of red wine, a quarter of a pound of anchovies, the same of bay salt, one ounce of allspice, two of long or black pepper, half an ounce of cloves and mace, a little ginger and horse radish, cut in slices; boil all together till reduced to half the quantity; pour into a pan; when it is cold, bottle and cork it tight, and it will be fit to use

in three months. If you have any pickle left in the jar after your walnuts are used, to every gallon of pickle put in two heads of garlic, a quart of red wine, an ounce each of cloves and mace, long, black, and Jamaica pepper, and boil them all together, till it is reduced to half the quantity; pour it into a pan, and the next day bottle it for use, and cork it tight.

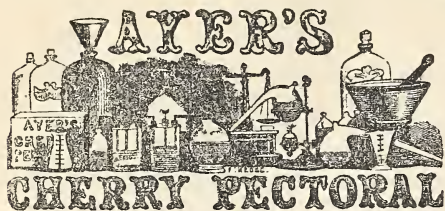
ECONOMY IN FUEL.—Let the coal ashes which are usually thrown into the dust bin, be preserved in a corner of the coal hole, and make your servants add to them from your coal heap, an equal part of the small coal or slack, which is too small to be retained in the grate, and pour a small quantity of water upon the mixture. When you make up your fire, place a few round coals in front and throw some of this mixture behind; it saves the trouble of sifting your ashes, gives a warm and pleasant fire, and a very small part only will remain unburnt.

HOW TO MAKE NICE CANDLES.—Candlewick, if steeped in lime and saltpetre, and dried in the sun, will give a clearer light, and be less apt to run.

Good candles may be made thus:—Melt together ten ounces of mutton tallow, a quarter of an ounce of camphor, four ounces of beeswax, and two ounces of alum; then run it into moulds, or dip the candles. These candles furnish a beautiful light.

TO SWEETEN MEAT AND FISH.—When meat, fish, &c., from intense heat or long keeping, are likely to pass into a state of corruption, a simple and sure mode of keeping them sound and healthy is, by putting a few pieces of charcoal, each the size of an egg, into the pot or sauce pan, wherein the fish or flesh are to be boiled. Among others, an experiment of this kind was tried upon a turbot, which appeared too far gone to be eatable. The cook, as advised, put three or four pieces of charcoal, each the size of an egg, under the strainer, in the fish kettle; after boiling the proper time, the turbot came to the table perfectly sweet and firm.

TO PRESERVE BISCUIT.—No other art is necessary than stowing it well-baked in casks exactly corked, and carefully lined with tin, so as to exclude the air; at the same time the biscuit must be so placed as to leave as little vacant room as possible in the cask; and when it is opened, through necessity, it must be speedily closed again with great care.



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COUGHS, COLDS, HOARSENESS, BRON-
CHITIS, CROUP, ASTHMA, WHOOP-
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This remedy is offered to the community with the confidence we feel in an article which seldom fails to realise the happiest effects that can be desired. So wide is the field of its usefulness and so numerous the cases of its cures, that almost every section of the country abounds in persons, publicly known, who have been restored from alarming and even desperate diseases of the lungs by its use. No family should be without it, and those who have used it, never will.

Read the opinion of the following gentlemen, who will be recognised in the various sections of country where they are located—each and all as merchants of the first class and of the highest character—as the oldest and most extensive wholesale dealers in medicine with an experience unlimited on the subject of which they speak. If there is any value in the judgment of experience, see

THIS CERTIFICATE.

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Prepared and sold by JAMES C. AYER, Practical Chemist, Lowell, Mass., and by druggists generally. sept 31

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CARTS.—Hand and Ox Carts, and Wheels of different sizes, made of the best material at short notice.

LANGDON'S CULTIVATORS, of two sizes—an excellent implement for making seed or open furrows, cultivating and digging potatoes, &c.

VEGETABLE CUTTERS, cutting sufficiently fine one bushel per minute. Price \$10 and \$12.

TOBACCO, OIL AND SEED PRESSES, made on progressive principles, to take the place of the hydraulic press. These are much more efficient than the latter; at the same time they are more economical. Their superior merits have been recently satisfactorily tested by several large oil manufacturers in this vicinity, where the machines may be seen in operation.

HORSE POWERS of all kinds, guaranteed the best in the United States. These embrace,

1st. The Chain Power, of our own manufacture, both single and double-gear, for one and two horses, which has never been equalled for lightness in running, strength, durability and economy. They are universally approved wherever they have been tried.

2d. The Bogardus Power, for one to four horses. These are compact and wholly of iron, and adapted to all kinds of work.

3d. Eddy's Circular Wrought-Iron large Cog Wheels, for one to six horses. A new and favorite power.

4th. Trimble's Iron-sweep Power, for one to four horses.

5th. Warren's Iron-sweep Power, for one or two horses.

VEGETABLE BOILERS, used for cooking food for stock, holding from 15 to 120 gallons.

ROAD SCAPERS for leveling roads, filling ditches, &c. Price \$4 50 to \$12.

ROOT PULLERS.—A useful instrument for removing bushes, roots, and small stumps.

BUSH AND BRIER HOOKS AND Scythes of various patterns.

WATER BAMS of every capacity, and combining the latest improvements.

PUMPS.—Suction and Forcing Pumps of all sizes, with pipe, at lowest manufacturers' prices.

NEW AND HIGHLY IMPROVED LACTOMETERS.—We have just got up a new article of cream gauge, far better and more accurate than any heretofore made. Price \$5, with a liberal discount to dealers.

GUANO.—A full supply of genuine Peruvian Guano of the first quality.

FERTILIZERS of various kinds, constantly on hand and for sale on reasonable terms—such as Peruvian and Patagonian GUANO.

GROUND PLASTER—in bags or barrels.

GROUND BONES.—Bone Dust, or Meal, of superior quality, in barrels.

POUDRETTE—at manufacturers' prices.

FIELD AND GARDEN SEEDS.—These are grown expressly for us, both in Europe and this country. They are of the choicest kinds, and of great variety. We also obtain, as soon as sufficiently tried and well approved, every new kind of seed suitable to be cultivated in the United States.

HORTICULTURAL TOOLS.—a complete assortment, consisting of Pruning Saws, Chisels, Pruning and Budding Knives, Pruning, Garden, Hedge, Flower and Vine Shears and Scissors, Garden Trowels, Forks, Hooks, &c.

TREE PLANTS AND SHRUBS—Should be transplanted south in the fall. Orders supplied from the best nurseries, at their prices.

MACHINE SHOP AND FOUNDRY.—Connected with our Agricultural Warehouse and Seed Store, we have a large Machine Shop, with Steam Power and Foundry, where any implements and Machines required for the Farm, Plantation, Garden, &c., can be made to order.

A. B. ALLEN & Co, 189 and 191 Water st., N. Y.

ENDLESS-CHAIN PUMPS, OR WATER Elevators. These highly approved machines operate upon the same principle as those used for grain. The elevator is made a part of an endless chain, that works over an iron wheel, and down into the water, around a pulley into the tube, through which a constant stream is made to flow into the pail, by simply turning the crank, attached to the wheel at the top, which any light hand can do with great ease. They are made of several sizes, and can be fitted up for any depth well, or cistern required.

A New Use for Chain Pumps.—One of these of large bore, is the most efficient machine ever used for emptying the vaults of privies, where the contents are in a semi-liquid state.

IMPROVED STOCK OF ALL KINDS.—Having had great experience in breeding and rearing stock, we offer our services to our friends to procure it of the best and most reliable kinds. As much notice as convenient is at all times desirable previous to purchasing, as it takes time to make good selections. Early in the month of September is the best time to purchase for the south. Shorthorn or Durham cattle, Devons, Herefords, Alderney or Jersey, and Ayrshires. Long Woolled Sheep—the Cotswold, Oxford, Leicester, Bakewell, and Lincoln. Mutton Sheep—the Southdown. Fine Woolled Sheep—such as the Saxon, Spanish, and French Merino. Suffolk, Berkshire, and Lincolnshire Pigs. The public should be on their guard in purchasing improved stock as many animals are palmed off upon the unsuspecting and ignorant, which are spurious.



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